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Where new meanings spring: The relationship between Indigenous cultural meanings for freshwater springs and management practices: Analysis of stories from Kalbarri, Western Australia

Tamara Lee Murdock
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WHERE NEW MEANINGS SPRING

**The relationship between Indigenous cultural meanings for
freshwater springs and management practices**

Analysis of stories from Kalbarri, Western Australia



Tamara Lee Murdock

A thesis submitted in partial fulfillment of the requirements for award of Bachelor of
Science (Environmental Management) Honours.

Faculty of Computer, Health and Science.

Edith Cowan University.

DATE OF SUBMISSION:

ABSTRACT

While Indigenous peoples' practices have been acknowledged to change and evolve, whether Indigenous cultural meanings invested in a specific place also change and/or evolve over time, and the affect these changes may have on land and water practices has generally been ignored. This study explores the relationship between Indigenous cultural meanings and land and water stewardship practices, and whether these change over time.

A qualitative research design was employed in this study to emphasise the complex and dynamic nature of language and the relationship between people, culture and nature. This study utilised interviews collected from traditional Indigenous people concerning stories about freshwater springs located at the mouth of the Murchison river in Kalbarri, Western Australia. Thematic content analysis was employed in this study, to identify emergent themes and construct an understanding of the meanings attributed to the springs.

A number of complex and interconnected themes emerged from the analysis and were categorised around the overarching notions of springs as a change of livelihood, springs as a vehicle for political expression and springs as a vehicle for the continuity of culture. Analysis revealed that the foundational meanings that participants derived from their culture and instilled in them have not changed, rather new meanings have been developed as a result of the participants interaction with their political, economical and social environments. The springs became a vehicle for possible future economic development and a source of securing a sustainable income and employment in the NRM sector, they represented reduced government welfare dependency and a desire for self-independence. An array of complex and interconnected themes encompassing the issue of 'continuity of culture and identity' emerged from analysis. Participants described their involvement in political activities to secure legal rights to occupy traditional lands through interaction and involvement in their political environment, to ensure culture, identity and familial solidarity were sustained and maintained. The investment of existing meanings and the creation of new meanings has lead the participants to evolve their stewardship practices of 'care' to include practices of 'protection'. Participants highlighted the existence of distinct

differences between TEK and NRM based on a person's spiritual connection to the springs.

The findings of this study support the proposition that Indigenous peoples adapt and evolve stewardship practices according to changes in meaning, therefore meaning is not only an on-going process but so are stewardship practices. These findings have important implications for Indigenous engagement and involvement in NRM. If meanings and stewardship practices are on-going processes, then engagement processes should be as well. If NRM intends to successfully incorporate and utilise Indigenous peoples' ecological knowledge, then natural resource managers should continually refrain from distinguishing 'ecological' from 'cultural', 'social', 'economical' or 'political' in conceptualising Indigenous peoples understandings and relationship with 'country'.

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Study Disclaimer

Any views, opinions and stories presented in this thesis are solely those of the author and/or the participants.

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CHAPTER 1

INTRODUCTION

1.1 Introduction

From the 1930s onwards Western societies have been entrenched in a productivism paradigm: a worldview of increasing yield and efficiencies of labour and capital for an expanding population, which amounts to the notion ‘more is always better’ (Lang & Heasman, 2004). People’s interaction and relationship with the environment has been reduced to the production and consumption of commodities (Lang & Heasman, 2004). Lowe, Murdoch, Marsden, Munton and Flynn (1993) suggests productivism can be thought of as an ideological fetishisation with output and increased productivity. It encapsulates an overwhelmingly utilitarian approach to land use based on intensive forms of agricultural production, driven by institutional, discursive and psychological processes by which social goals are subordinated to the domains of economic objectives (Holliday, 2000; Burton, 2004; Fitzpatrick, 2004). Argent (2002) describes three key elements of productivism. It involves intensification of production through increased utilisation of capital and external inputs to enhance yield per unit area of land. There is also a concentration of farmland owned by a monopoly of farmers. Finally, specialisation occurs in key regions in particular industries, due to inputs and expertise concentrating on advantageous local factors of production.

Natural Resource Management (NRM) is deeply embedded within this paradigm. Berkes and Folke define it as “resource management based on Newtonian science and on the expertise of government resource managers” (1998, p. 5). Gadgil and Berkes (1991) and McNeeley (1991) are among the many who insist that NRM is rooted in this utilitarian and exploitive worldview that denotes human dominion over nature. In their seminal paper on the pathology of natural resource management, Holling and Meffe (1996) suggest the focus of NRM has been towards securing short term benefits for society by attempting to control nature, reduce its threats and ensure its predictability. Nature is essentially portrayed as a ‘resource’, which gives us reason to

conserve and protect it (Evernden, 1985). These resources are treated as discrete entities, from which yields can be individually maximised and isolated, simultaneously mining resources and polluting ecosystems (Berkes & Folke, 1998; Fitzpatrick, 2004).

Holling and Meffe (1996) and Meffe (2002) suggest management of these natural resources is an anthropocentric, contrived, top-down, and command-and-control approach. Command dictates direct authority over resources in a way that obtains the desired effect, and control signifies the manipulation and/or management of a resource in order to achieve a desired outcome (Meffe, 2002). Meffe states there is an inherent need for this approach in circumstances where the problem is well-defined, bounded and responds linearly to manipulation without unforeseen consequences and externalities, such as constructing a building or wiring a house. However, the inherent complex and unpredictable nature of ecological systems dictate that these requirements can never be met (Meffe, 2002). This strategy has been successful in the short term, but in the end encourages a socio-ecological ecosystem collapse (Holling & Meffe, 1996; Gunderson, 2000).

Put in ecological terms, our effort to control nature causes a slow and continuous reduction in the natural variations and resilience, which contributes to an ecosystem more sensitive to both natural (e.g. fires and floods) and man-made disturbances (e.g. eutrophication and discharge of human waste) (Holling & Meffe, 1996; Berkes, 1999). Socio-economically, increased production and control leads responsible authorities to alter their focus from the original problem, it alienates those responsible from both the ecosystem and the people affected by their actions (Holling & Meffe, 1996). For this reason Holling and Meffe (1996) suggest those responsible become less flexible toward and more ignorant of the ecological changes that are continually taking place in the social ecological system.

Therefore under the NRM paradigm the primary function of land and water is not to conserve or preserve it but to cultivate and shape it. The environment is not considered just space surrounding us, but is constantly constructed and reconstructed through changing management practices (Silvasti, 2003; Lang & Heasman, 2004). A landscape mirrors the values that are important to people at a given time due to the persistent accompanying attitudes, goals, roles and behaviours of productivism

(Heasman & Lang, 2004), resulting in less resilient, more sensitive ecosystems, narrow-minded and inflexible institutions (Holling & Meffe, 1996; Silvasti, 2003; Burton, 2004). What all this articulates is that 'nature' is considered a 'resource' for human use which can be 'managed'.

Now productivism is under strain and showing its major limitations. It has been immensely successful in raising production in line with an unprecedented rise in world populations, but health and environmental issues are threatening: matters such as land shortage, structural changes in fish populations and in forests, water depletion, soil infertility, pollution, the expansive impacts of geological events and climatic extremes, and climate change are increasingly evident. NRM tries to manage but is generally unsuccessful because it is beholden to the paradigm that created the issues.

Interestingly the literature presents an alternative worldview and approach to land and water, which exists from within the culture of Indigenous peoples (see Cardinal, 2001; Rose, 2003; Langton, 2006; Mazzocchi, 2008). While varying spatially, it evolves out of the environments in which these people live (Johannes, 2003).

Adolphus Elkin, an influential anthropologist during the mid-twentieth century, defined the Australian Indigenous worldview as "a view of nature and life, of the universe and man, which ... unites them with nature's activities and species' in bonds 'of mutual life-giving'" (1964, p. 133). Rose (2003) further describes this worldview as being place-based or local within a environment, that is holistic, and works along various scales from individual (person, animal, plant, place, country) to world.

However, Mazzocchi (2008) points out that despite Indigenous worldviews being place-based, there are a few common characteristic features. For example, all animate and inanimate entities are viewed as interconnected and interdependent, enmeshed in a symbiotic relationship in which Indigenous peoples attain their sustenance (Mazzocchi, 2008).

Since Descartes, Western society has held the dominant view that culture-society-nature are separate, a view that promotes human domination over nature (Haila, 1999). As exemplified by their worldview and symbiotic relationship with nature, in general Indigenous peoples have in common is that they do not recognise or believe that such a dichotomy exists (Berkes, 1999; Johannes, 2003). Growing out of this discourse is a reservoir of literature which attests to the concept that culture-society-

nature are inseparable (see for examples Agrawal, 1995; Anderson, 1996; Rose, 1996; Berkes & Folke, 1998; Langton, 2002; 2006; Briggs, 2005). Applied ecologist Fikret Berkes (1999) has highlighted in his research concerning Indigenous management systems, that a significant relationship exists between nature and culture suggesting there is no separation, rather in Indigenous cultures nature is infused with sacredness. In light of this view of Indigenous cosmologies, Mazzocchi adds to Berkes' recognition in stating that nature and society form "with the sacred dimension a continuity that is culturally produced" (2008, p. 46). Similarly during research concerning Indigenous totemism in New South Wales, Rose found that many of the Indigenous people she interviewed raised concerns about the separation of culture and nature, with one interviewee explicitly stating "the natural and cultural are one. Aboriginal people and landscape, the environment, they go as one...it's part of them, it's who they are" (2003, p. 33). This concept has led to the cultivation of a repository of evolving and adapting practices to achieve a mutually beneficial relationship, in recognition that neither can live or function without the other (Rose, 2003; Briggs, 2005).

Indigenous knowledge is similar to Western science in that it is based on the accumulation of observations, but it differs from science in some fundamental ways (Berkes, Colding & Folke, 2000). The philosopher Paul Feyerabend (1987) differentiated two opposite traditions of thought: abstract traditions (science) and historical traditions (Indigenous), which include knowledge systems retained by people outside of Western science, knowledge that is often encrypted in cultural practices and rituals. Similarly Kalland (2000) argued that these two paradigms or ways of understanding are two parallel modes of acquiring knowledge about the world. The two knowledge bases are fundamentally distinct in that Western science is intensely directed towards "quantification and one-dimensional causations divided into disciplines, each with their own bodies of theories and methodologies" (2000, p. 326), on the other hand Indigenous knowledge is place-based and holistic. Other academics such as Agrawal (1995) have criticised those who suggest there is a dichotomy between Western science and Indigenous knowledge, questioning whether the dichotomy really exists and suggesting some academics may be overemphasizing the difference.

Despite Agrawal's (1995) criticisms, previously this extensive and factually accurate Indigenous knowledge was assumed by some in Western society to be non-existent and static and timeless, therefore of no use to modern society (Bebbington, 1993; Adams, Potkanski, & Sutton, 1994; Kalland, 2000). This was evident during the colonization, forced removal and dehumanisation of Indigenous peoples of Australia and many other countries. Children were removed from their communities, Indigenous peoples were prevented from speaking their languages and from practicing their culture essentially stripping away their identity. To some, Indigenous knowledge is regarded as closed, parochial, un-intellectual, primitive, emotional and part of a residual, traditional and backwards way of life (Agrawal, 1995; Ellen & Harris, 2000; Herbert, 2000; Briggs, 2005).

However, this assumption is in contradiction to a global history, a history that weaves the lives and stories and experience of Indigenous peoples with the health and productivity of the environment (Rose, 1996; 2003). For example, research carried out into Indigenous fire ecology demonstrated that by constructing and maintaining patchy habitat diversity, burning the country is mutually beneficial to both flora, fauna and people, assisting them to thrive. Initiated by Rhys Jones in 1969 under the label of 'firestick farming', Indigenous peoples' use of fire had and in some places is still able to have a profoundly (and for the most part) positive effect on Australian biological communities. This knowledge in particular became increasingly important and valued in light of the growing rate of faunal extinction in Central Australia. It became clear to many ecologists that the cessation of Indigenous burning was a major factor of extinction (Rose, 2008). Some researchers suggest that it is exactly when Indigenous peoples are excluded that degradation and extinction is most likely to occur (see Pimbert & Pretty, 1995; Kimmerer, 2000).

Indigenous peoples have inhabited these lands for many millennia, travelling far and wide, there is no place where the feet of Indigenous peoples have not preceded those of Western society, Rose adds;

“...nor is there any place where country was not once fashioned and kept productive by Aboriginal peoples' land management practices. There is no place without a history; there is no place that has not been imaginatively grasped through

song, dance and design, no place where traditional owners cannot see the imprint of sacred creation” (1996, p. 18).

Indigenous societies realised early that their dependence on land and water meant they had to evolve and generate practices in order to economise with regards to their use (Johannes, 2003). Anderson (1996) and Johannes (2003) suggest the method involved marrying culture, land and water together to accentuate the important link between nature and humans. The diversity of Indigenous culture reflects their intimate connection to the land and water they call home, entirely surrounding them with cultural meaning that their tradition has given to their external surroundings (Anderson, 1996; Rose, 1996; 2003). Berkes (1999) points out that culture essentially embodies environmental knowledge and administers human emotional involvement with the nonhuman world.

One expression of Indigenous knowledge that has become prominent in the fields of anthropology, sociology, ecology and natural resource management is Traditional Ecological Knowledge (TEK). At present there is no universally accepted definition of TEK in the literature although many have been presented. Berkes et al. (2000, p. 1252) defines it as “a cumulative body of knowledge, practice, and belief, evolving by adaptive processes and handed down through generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment” This definition was developed from their earlier work (see Gadgil, Berkes & Folke, 1993; Berkes, Folke & Gadgil, 1995) concerning TEK and further recognises that TEK is largely a characteristic of societies with historical continuity in resource use practices (Berkes et al., 2000). Earlier work by Martha Johnson adds to this definition by suggesting that TEK includes a “system of classification, a set of empirical observations about the local environment, and a system of self-management that governs resource use...and [the ability to adapt] to the new technological and socioeconomic changes of the present” (1992, p. 4). Although there are many definitions present in the literature many share similar characteristics in defining TEK. There is a aspect of local knowledge concerning the environment, a component of practice concerning how people execute resource use activities, and a component of belief and ritual regarding people’s relationship to the environment (Johnson, 1992; Langton, 1998; Berkes et al., 2000; Pierotti & Wildcat, 2000; Cavalcanti, 2002;

Butler, 2004). In short Berkes et al. (2000, p. 1252) states that TEK can be defined and classified as a “knowledge-practice-belief complex”.

Berkes (1993) notes the difficulty in agreeing upon one universal definition of TEK stems from the fact the words ‘traditional’ and ‘ecological knowledge’ are in fact ambiguous. ‘Traditional’ generally denotes cultural continuity transmitted via social attitudes, values, beliefs, standards and rules of etiquette and practice elicited from historical experience. Anderson (1996) points out that while TEK is described as ‘traditional’, this should not be inferred to mean that it cannot evolve or that knowledge is repetitive. Rather, ‘traditional’ implies that each generation compares their lived experiences to what has been taught and tests the reliability of knowledge gained (Barsh, 1997). This is in order to be capable of making informed decision when modifying practices and responding to changing environmental conditions (Pierotti & Wildcat, 2000). The validation of this method lies in its utilisation over many millennia allowing ample time for long-range consequence to become apparent. Thus Indigenous land and water practices are clearly not static. Indigenous peoples themselves acknowledge that land and water are never in a state of equilibrium therefore they continually evolve and adapt their practices to maintain the mutual beneficial relationship (Berkes & Folke, 1998). The term ecological knowledge as Berkes (1993) and Mazzocchi (2008) suggest presents additional definitional issues of its own, as in Western science ‘ecological’ is attached to the scientific discipline of ‘ecology’ that focuses on the distribution and abundance of living things and the relationship between organisms and their environment, therefore deemphasising the relationship between the cultural and environmental components central to TEK. Berkes proposes for the term TEK to be plausible, ecological knowledge must be redefined in broader terms to refer to “the knowledge, however acquired, of relationships of living beings with one another and with their environment” (1993, p. 3).

Some scholars suggest that TEK is a way of breaking free from productionist thought, derived from the notion that the physical, biological, and cultural environment is part of our lives and that knowledge and experience is gained through this interaction (Johannes, 2003; Rose, 2003). TEK acknowledges that humans and culture are intrinsically connected to nature, and that all entities are interrelated, whilst maintaining their individuality (Rose, 2003). More explicitly it acknowledges the

importance of Indigenous knowledge to current land and water practices. It shifts the focus of theories concerning nature from humans alone, to humans and nonhuman entities as a community (Johannes, 2003).

Because culture evolves out of people's connections and relationships with land and water at specific localities a place-based approach employing TEK is appropriate (Berkes et al., 2000). It allows for unique features of individual places to be focused on, while tailoring specific management plans to local circumstances, and promoting adaptive management. Manual-Navarrete, Slocombe and Mitchell (2006) assert that TEK aims to include all people and their perspectives, which can lead to enhance community cohesion, opportunities for shared learning and an acceptance of cultural diversity.

One avenue to discuss TEK as a place-based approach is through an element that has apparent universal meaning and commonality to humanity: water. Water is the most ubiquitous and essential element (apart from air) present on earth that is of fundamental necessity for the survival of human and nonhuman species, and is among few of the common experiences shared by all (Strang, 2002; 2005). Water manifests itself in a multitude of qualities, the most important being rain. Because of this high dependence on water, all societies are attentive to the effects water has on the environment, whether this is a concern about the production of resources, the availability of fish, the watering of cattle, the need for water is undeniable (Strang, 2005). Ultimately, water holds life in its hands and we cannot escape the fact that everything depends on there being just the right amount of water available.

Strang (2005, p, 92) through her study concerning the relationship between sensory experiences, material realities and the creation of cross-cultural meanings, suggests that two important "universalities" exist: the qualities of water and, the "physiological and cognitive processes that are common to all humans". This enables cross-cultural meanings within the context of water to persevere temporally and spatially (Strang, 2005). Strang (2005) proposes three layers exist within the realm of cross-cultural meanings, (1) a common basis for the construction of meaning, which is derived from the qualities of a universally available entity within the environment (i.e. water), (2) common human sensory and perceptual processes, and (3) specific cultural beliefs and assumptions, learned behaviours and embodied predispositions. The third layer is

the most vital, it permeates all layers and is what produces the diversity of cultural meanings for communities and people, but it is also the layer that seems to impede our ability to care for land and water, because of our inability to open ourselves to alternative cosmologies.

Gustafson (2001) states that meanings are place-based and emerge as a result of people's interaction with the surrounding environments, giving individuals a subjective territorial identity. In the cosmologies of Indigenous peoples, water represents the symbol of life (Langton, 2006). Indigenous peoples are constantly naming and assigning cultural meanings to various phenomena intrinsic to water (Langton, 2006). Langton explains that to "Indigenous peoples the meaning of water is constituted as being more than just a physical entity it is constructed "spiritually, socially and jurally" (2006, p. 144). On the other hand, for non-indigenous people water generally carries meaning concerned with power relations, which emerge out of discourse regarding water ownership and obtaining social power. Ownership of swimming pools or bores is viewed as expressions of wealth and status and deprivation of water is a common symbol of poverty (Strang, 2005). For Indigenous people water provides the connections between families, and signifies belonging (Strang, 2002; Rose, 2003). Strang (2005) suggests that by being located in the immediate landscape the web of life is conceptualised on a less theoretical scale. Mazzocchi (2008) notes that Indigenous worldviews enmesh and incorporate cultural meaning in defining both their individual and group identities.

Researchers from many disciplines, including anthropology, sociology, geography and environmental psychology, have argued that 'who we are' is intimately related to 'where we are' (Dixon & Durrheim, 2000). Gillian Rose (1995) postulates that identity is the link that connects people and place, and that meanings invested in place may be constructed in such a way they become a central component of a person's identity. In their research concerned with the role of place and identity Twigger-Ross and Uzzell (1996) present evidence that place plays an active role in the construction and maintenance of identity. The authors claim that place is a salient part of identity rather than a mere 'backdrop' or 'setting' in which identity is developed. Proshansky, Fabian and Kaminoff also found in their study that one's relationship with place is important in the construction of identity, describing it as "a potpourri of memories, conceptions, interpretations, ideas and related feelings about specific physical

settings” (1983, p. 60). They further indicate that the continuity of place is critical to the continuity of one’s own identity (Proshansky et al., 1983).

Langton (1998) contends that Indigenous beliefs about the intimate relationship between people and nature constructs a different concept of identity from what is understood in Western science. Indigenous peoples, Langton argues, are socialized cultural beings consisting of more than one conscious being, but rather, as spatialised by virtue of their spiritual relationship with non-human beings. Strang (2005) presented similar evidence; to the Indigenous peoples in North Queensland water is central to the composition of one’s identity. This, Strang suggests, can only serve as a reminder that as a ‘matter of substance’ water is integral to the construction of identity, as such when water is threatened by pollution or at risk of degradation “anxieties about social relations are translated into concerns about water quality” (2005, p. 110).

It is not surprising then, that a large portion of people’s knowledge and management is focused on water. Indigenous people in particular have always maintained in fine detail the locations of rockholes, soaks, wells, springs, and other available forms of water (Rose, 1996). Water is not just for people, it is for everything, which means that specific sites which were heavily relied upon were preserved and protected, it is at these sites that flora and fauna were most diverse (Rose, 1996). These sites were also preserved and protected because each localized site is a source of an ancestral being, which are all linked by stories about ‘Dreaming’ (Langton, 2006). Dreaming consists of narratives describing how ancestral beings create and recreate the land and/or water and its resources, dreaming occurs in a special form of time/space (Rose, 1996). To Indigenous peoples water is part of their cosmology; within water, spirits of the ancestral past are present today and just a single water source can encompass a mélange of cultural beliefs and meanings, which permeate all aspects of human life (Strang, 2005; Langton, 2006).

Currently in Australia TEK and Indigenous peoples involvement in NRM has predominantly been focused on National Park and Protected Area management. Successful examples include Kakadu, Nitmiluk and Gurig National Parks in the Northern Territory. Carter (2010) notes that while there are some successful examples of joint management (see Garnett et al. 1995; Kennet, 1997; Nesbitt et al., 2001), they

are predominantly carried out on lands where Indigenous peoples have gained legal rights over land through Native Title or other avenues of political struggle. Carter is particularly critical of the transfer of generic engagement policies and protocols that have been developed for remote regions of Australia to more urbanised regions where land tenure is highly contested and complex. Land tenure, Carter claims, is only one of the many aspects that nullifies the generic engagement strategy's applicability in urbanised regions, as each community may have differing concepts of connection, identities and social and political processes. The complex and dynamic nature of communities presents a difficult challenge for government agencies wanting to engage with Indigenous peoples in urbanised communities. Carter finally notes that these complexities have yet to be articulated within government engagement protocol and challenges whether universal engagement protocols are even possible or desirable.

Currently, the paradigm of Western society asserts that nature is a resource intended for use, exploitation and domination by humans. This is mirrored by the basic principles of control, intensification, increased productivity and top-down approaches inherent in NRM. In combating the socio-ecological issues which have resulted, resource management has schooled the productivist in the art of cautious exploitation (Evernden, 1985). Therefore, we must look at what knowledge already exists within land and water. That found in Indigenous societies is one such source; these peoples have maintained a mutually-beneficial relationship with land and water for many millennia. Born out of their cultural beliefs they assert that humans and nature are intrinsically linked, neither can live or function without the other. Western society was quick to dismiss and assume a stance that denied the existence and relevance of Indigenous knowledge, but Western society may have been hasty in this derogatory characterisation. Indigenous peoples understandings are shaped by societal and cultural meanings which produces a view of country as "a series of places that are constituted by the living drama of history, sacred meaning, memory and social obligation" (Langton, 2006, p. 148).

1.2 Significance of Study and Research Objective

The purpose of this study was to explore the relationship between Indigenous cultural meanings and land and/or water management practices. A growing repository of literature now attests to the notion that humans, culture and nature are inseparable and that Indigenous peoples knowledge has evolved and changed over generation in reaction to changing local environmental conditions. TEK is gaining momentum as an alternative to current theory and practices, a place-based approach grounded in the premise that the physical, biological, and cultural environments are part of our lives and that knowledge and experience is gained through this interaction.

Though water is cultural, specific and diverse in form, it provides an avenue of commonality in which the understandings of the human-nature relationship can be explored and incorporated whilst acknowledging the importance of TEK in dealing with current and future environmental issues. Whilst, there is acknowledgement of Indigenous practices changing and evolving, and of the importance of Indigenous knowledge to land and water practices, what has been neglected particularly in the literature is whether Indigenous cultural meanings invested in a specific place also change and/or evolve over time.

Accordingly, the aim of this study was two-fold, firstly to answer the question 'do Indigenous cultural meanings invested in a specific site change and/or evolve AND does it effect Indigenous interactions with land and water practices'. Secondly, to describe the implication of the study's findings for Indigenous engagement and involvement in Natural Resource Management.

1.3 Structure of Thesis

The following chapter details the qualitative study design adopted to explore the relationship between Indigenous cultural meanings and land and/or water practices. The results of analysis are then presented, although interrelated and overlapping issues surrounded each of these themes, their distinction was maintained for ease of understanding and clarity. The final synthesis chapter highlights themes identified in the previous chapters and summarises results. The final chapter also examines the relevance of findings to natural resource management and reflects on the limitations of this study, and suggests areas for further research.

CHAPTER 2

RESEARCH DESIGN AND METHOD

Research Design

2.1 Epistemology

2.1.1 Social Constructionism

The literature attests to the notion that oral communication is the predominant method employed by Indigenous people to transfer knowledge over generations (see Rose, 1996; Berkes, 1999; Barker, 2006; Langton, 2006). Therefore a study involving Indigenous people and the transfer of knowledge from participant to researcher, required an epistemology that acknowledged the key role spoken language or 'talk' plays in the construction of meaning. Social constructionism acknowledges that language is the medium through which we construct meaning (Edley, 2001). It advocates that as soon as we begin to 'talk' about the world around us we inevitably begin to construct realities and attach meanings to objects. As Edley points out, "any attempt to describe the nature of the world is subject to the rules of discourse...because epistemologically speaking, reality cannot exist outside of discourse, waiting for fair representation" (2001, p. 437).

This project was based within a social constructionist episteme due to the emphasis placed on the complex and dynamic nature of language and culture. Social constructionism explicitly acknowledges the key role culture plays in directing our behaviour, practices and shaping the way in which we construct realities (Crotty, 2003; Gemignani & Pena, 2007). As demonstrated in the previous chapter culture influences the attachment of meanings to place therefore the study required an epistemology that highlighted the existence of a relationship between people, culture and nature.

Social constructionism is based on the concept that we as human beings are not separate from social realities, rather meaningful reality is dependent on local interactions between us and our world, each closely shaping the other (Crotty, 2003; Cunliffe, 2008). Proposing the existence of multiple realities and rejecting the concept of absolute truths social constructionism highlights the importance of interpretive processes and practices in constructing realities (Gemignani & Pena, 2007). This suggests that it is when we are active in society that we begin to interpret the meaning of incidences and/or that it is from the understandings of others that we are able to construct our own sense of place and identity (Cunliffe, 2008). As Gemignani and Pena suggest “every reality is the effect of shared understandings, conventions, negotiations, and power-based relations that produce and are produced by a discursive context” (2007, p. 278).

2.2 Theoretical Perspective

2.2.1 Symbolic Interactionism

Supporting this epistemological position I drew on symbolic interactionism as the study’s philosophical stance as its three basic premises speaks to the existence of multiple realities. Symbolic interactionism is a framework that promotes the crucial role humans play in the process of meaning construction and interpretation (Liamputtong, 2009). Herbert Blumer coined the term and summarised the symbolic interactionist approach according to three principles. First, “human beings act towards things on the basis of the meanings that the things have for them”. Second, “the meaning of such things is derived from, or arises out of, the social interaction that one has with one’s fellows”. And third, “these meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he or she encounters” (1969, p. 2).

This theoretical perspective directly related to the purpose of the study. Symbolic interactionism provided an approach to understanding and explaining society and the world; it does this by exploring the multitude of understandings in culture by dealing with topics such as community, interrelationships, communication and language, and these were what I wanted to explore. It was also the foundation for assumptions

brought to the chosen methodology. Methodologically, symbolic interactionism infers that the researcher understand and perceive all aspects of life from the participant's perspective (Crotty, 2003).

2.3 Methodology

2.3.1 Case Study

The study was within the methodological boundaries of case study research because the study involved exploring a bounded system and developing case-based themes, interpretations and understandings. It was evident in the literature that confusion exists over the definition of what case study research involves. Therefore it was important to define what is meant by 'case study research' in relation to this project. The definition employed originates from a paper produced by Luck, Jackson and Usher (2006) in the field of Nursing Science, drawing upon its application by multiple prominent case study researchers.

The case is a single specific phenomenon. Case study research has particular boundaries; therefore, the case is a system that is bounded by time, place, event or activity, and these boundaries can assist in limiting data collection. These boundaries are explicitly set via the description of the locale, culture, group process or institution (Luck et al., 2006, p. 104).

The project for the most part was bounded by three characteristics. Firstly, the length of the project was restricted to two university semester or one honours year. Secondly, the natural landscape features under investigation was geographically bounded by a major waterway. And third, the focus of the study was on Indigenous cultural knowledge which itself is contained within the boundaries of traditional lands.

Methods

2.4 Case Study Background

The case study was focused on people's connections and relationships with freshwater springs situated within the town of Kalbarri located on the southern bank at the mouth of the Murchison River. Kalbarri is 591km by road north of Perth within the Shire of Northampton, or as the traditional Indigenous peoples refer to it 'Nanda' country within the 'Yamatji' region (Figure 2.1). Nanda people have a very strong spiritual and 'dreamtime' connection to the area and particularly to the Murchison River which has numerous cultural heritage sites located throughout.

The source of the Murchison River is located in the Little Sandy Desert (near Meekatharra) approximately 500 km inland from the mouth at Kalbarri. The catchment covers roughly 120,000 km² of arid to semi-arid scrubland with many smaller rivers joining as it flows westward (Allen, Morgan & Gill, 2005). Approximately eight freshwater springs located on the southern bank of the Murchison River were the focus. These springs are located within the Shire foreshore, reserved for parks and recreation therefore at risk of desecration from further development and continued human interaction. There is a mixture of permanent and seasonal springs with the first located in Kalbarri town center and the last approximately 12km to the north.



Figure 2.1: Study area: Town of Kalbarri, springs located on the southern bank of the Murchison River.

2.4.1 A Brief History of the Study Area to Present Day

Long before the arrival of European settlers in Kalbarri the Nanda Aboriginal people inhabited the area. It is believed the Nanda people lived in an area stretching from Woomeral River in the north, out to the Kennedy Ranges in the east and down to Greenough river in the south.

It is thought that the first European people to have ever inhabited Australia were two survivors of the 1629 Batavia shipwreck marooned at Wittecarra Creek in Kalbarri. They were left to fend for themselves as punishment for their role in the murderous mutiny on the nearby Abrolhos Islands. In a book detailing the history of Kalbarri (Mitchell, 2009), over a two year period (1696 – 1697) Dutch explorer Willem de Vlamingh travelled through the area that was to become modern-day Kalbarri as he explored the Western Australian coastline. Anchoring in Gantheaume Bay in Kalbarri two parties came ashore one stumbling upon a freshwater spring and five huts made of clay. Although there were clear signs of human inhabitants they did not encounter Indigenous people.

Fifteen years later in 1712 a second Dutch ship the Zuytdorp was wrecked north of Kalbarri crashing into the menacing cliff face. According to Mitchell (2009) the majority of passengers were thought to have died though a few survivors made it to shore. Despite the fact there was evidence of their survival no bodies have ever been found encouraging the theory that Dutch people fraternized with local Nanda people (Mitchell, 2009).

Upon the establishment of the Swan River Colony Captain George Grey in 1839, travelled aboard an American whaling ship given the task of exploring and reporting back on potential mineral and pastoral opportunities around Carnarvon. After encountering a violent cyclone and losing all their supplies, Grey and his men were forced to abandon their exploration and head south eventually crashing to the shores of Kalbarri (Grey, 1841). It was at that point they became the first officially recorded Europeans to set foot in modern-day Kalbarri. It was during that time Grey came in contact with Nanda People and recorded his findings, 'its shores abounded with springs and were bordered by native paths...some of which were ten and twelve feet deep and were altogether executed in a superior manner' (Grey, 1841).

In 1848 one of the oldest pastoral station in Western Australia was established, Murchison House Station with the homestead located approximately 13km east of Kalbarri town center (Mitchell, 2009). Settled by Charles Von Bibra Murchison House Station was to later supply meat to convict lead miners with many Indigenous people working as cooks, housemaids and drovers. The station borders over 60kms of ocean shoreline and 30kms of Murchison River floodplains dotted with permanent springs and soaks providing a supply of water all year round ("Murchison House Station", n.d.).

Despite the establishment of the station little development occurred in Kalbarri and it was not until 1951 that the town of Kalbarri was gazetted within the Shire of Northampton, amalgamated with land resumed from Murchison House Station and a C class reserve (Mitchell, 2009). Another twelve years would pass before Kalbarri National Park was gazetted in 1963. Today the tourism and fishing industry support approximately 1,500 permanent residents rising to over 10,000 during holiday periods, in the vicinity of 150,000 visitors per year. The current planning strategy is 18 years old prepared in 1992 but due to development pressures caused by expanding tourism and an increase in permanent residents, a new planning strategy was developed in 2009 and is currently out for public comment (LSP, 2009).

2.4.2 Study Site Determinants

Three factors determined the study areas selection. First, both biophysical and social changes associated with the settlement and development of Kalbarri by non-Indigenous people could be recounted by local traditional Nanda people. Secondly, I came in contact with the springs in 2009 whilst working as a Caring for Country officer for Yamatji Marlpa Aboriginal Corporation. During this period I witnessed firsthand the lack of natural resource management occurring in the area, as well as the effects of increased tourism and development pressures. It was also at this point I met two of the participants who shared cultural and historical knowledge with me and from these discussions I could see the need to explore their meaning further. Thirdly, as I grew up in Geraldton two hours south of Kalbarri and I visited the area on numerous occasions throughout my childhood therefore I have a personal interest in that environment.

To enhance the reliability of my study I acknowledge that all of the participants are well known to my mother through her work as a employee of Native Title organisation for over twelve years. My mother has known four of the participants since childhood and has both a working and personal relationship with them. Three of the participants are reasonably familiar to me via previous work and when in the company of my mother.

2.5 Data Collection and Strategy

2.5.1 Preparation and Practice

All aspects of preparing for the interviews are outlined below.

Literature search and training

Alongside advice and guidance from supervisors, qualitative research texts were reviewed in order to make a informed decision concerning the appropriate interview technique. Time was also spent familiarising myself with the functions of the digital voice recorder. I recorded my voice as well as conversations with immediate family members at varying distances away from where the recorder was located including varying levels of background noise to ascertain recorder quality.

2.5.2 Sample size and selection criteria

Due to the time constraints of the study the number of participants was initially set at five to six. This allowed for rich accounts of the participant's lived experiences to be provided as the study aimed to sample for meaning rather than frequency and did not depend on generalising findings (Liamputtong, 2009). Because meaning is complex (Gustafson, 2001) the major limiting factor was the time required to transcribe, code and analyze interviews. The method of purposive and snowball sampling was employed to select participants. The five inclusion criteria were:

1. Participant was recommended by local informants;
2. Participant was of Indigenous descent and belong to the traditional Nanda clan;

3. Participants were at least 45 years of age. This ensured a sufficient number of recollections detailing historical and present-day changes were captured. Two participants would also be over 60 years of age to ensure sufficient data was collected dating to the period before the town site of Kalbarri was gazetted;
4. Participants who have had interaction with the freshwater springs over this period;
5. Participants were able to give overlapping recollections to assist in the cross-interview corroboration of the interview material.

In relation to criterion one, my first source of recommendation was my mother, who has been actively involved in the Indigenous community all her life and has worked in close contact with potential participants as an employee of the region's Native Title organisation. Criterion four involved contacting potential participants recommended to me and later visiting or speaking with them via telephone to ascertain whether they could provide an information-rich interview. To make this assessment I enquired about the type and extent of their interaction with the springs and the study area.

Six potential participants were identified (four males and two females) and invited to take part in the study via a formal letter. Unfortunately over a three week period only two people responded to the invitation, both met the selection criteria and gave every indication of being able to provide information-rich interviews. They were then asked if they could recommend other people who might meet the selection criteria, a further two potential participants were recommended and sent formal invitation letters. Both responded and met the selection criteria but one was unable to participate due to work commitments. At this stage I had three participants (two males and one female).

Upon organising interview dates and times one participant expressed how she was unsure whether she could provide the information I was seeking. From previous conversations I had come to the conclusion that she could indeed provide the necessary information and as a method of reassurance we agreed that both her daughter and granddaughter would take part in her interview. I determined that it would not compromise her interview as her daughter met the selection criteria and

whilst her granddaughter did not meet criterion three, she may still provide valuable information regarding the transfer of knowledge to younger generations.

The final participant was included as a result of her involvement in the group interview. Her husband was already a participant and had agreed to have the group interview take place at their home and by chance she was present and willingly took part in the discussion. Although she did not meet criterion one she met the remaining criteria and provided detailed and rich information therefore her comments were included. Seven participants (three males and four females) in total (including the pilot interviewee) took part in the project.

The application of the sampling strategy whilst unsuccessful in the beginning managed to yield participants who met the selection criteria and were able to provide information-rich interviews. Time was the major limiting factor as potential participants could not take part due to prior work and family commitments. A considerable effort was given to ensure the inclusion of both males and females. The final list of interviewees is presented in Table 2.1.

Table 2.1: List of Participants, showing their age and the nature of their involvement in the interview process (place(s) and date(s) of interviews).

Name	Year of birth	Interview Details
Mr. William Mallard Senior	1937 (73 yr.)	Participant's home (Barrel Well Community, Ajana) – 22/06/2010 and 05/07/2010
Nanna Iris Mallard	1933 (77 yr.)	Participant's home (Northampton) – 23/06/2010 Mr. Mallard's home (Barrel Well Community, Ajana) – 05/07/2010
William (Willow) Mallard Junior	1963 (47 yr.)	Participant's home (Barrel Well Community, Ajana) – 12/06/2010, 18/06/2010 and 05/07/2010.
Brodeine Nutter	1980 (30 yr.)	Nanna Iris' home – 23/06/2010
Mrs. Peggy Mallard	1944 (66 yr.)	Participant's home (Barrel Well Community, Ajana) – 05/07/2010
Gregory (Greg) Mallard	1961 (49 yr.)	Park located in the town of Kalbarri – 22/06/2010
Helen Nutter	1962 (48 yr.)	Nanna Iris' home (Northampton) – 23/06/2010

2.5.3 Interview Method

Pilot Interview

The interview was critical to my method therefore piloting was essential. A single pilot interview was carried out in order to:

- test the invitation letter, information package and Statement of Disclosure and Consent Form;
- practice explaining the project to participants to ensure they have an understanding of the project and their role;
- test the interview method predominantly the type, structure and order of questions;
- assess my skills own skills as the interviewer including ability to manage the digital voice recorder, ensure the interview stays within the project context and time management.

In order to ensure maximum benefit to the study was derived from the pilot interview the sampling strategy intended to be used was also tested (i.e. purposive and snowball sampling). Strong criteria was set as I would only be interviewing members of the Nanda clan who have interacted with the springs, this was reflected in the selection of the pilot interviewee.

Acting on advice from local informants alongside my own knowledge I contacted a potential pilot interviewee via mail and later phone but was informed they were unable to take part. After careful consideration and further discussion with informants and supervisors the son of a participant was deemed an appropriate candidate for the pilot interview as he met all requirements and was known to me personally. Because the pilot interview would take place at the home of a participant there was concern that the participant may join in or hear questions that were asked, possibly influencing their own independent response. The situation was avoided as the participant was not home on the day of the pilot interview.

On completion and review of the interview many of the aspects involved in interviewing described in the literature were experienced. These included the ability to position the recorder to ensure optimal sound recording; the difficulty of listening,

maintaining eye contact, tracking themes and questions, time management and ensuring the interview stays within the context of the project. On the other hand, already knowing the interviewee enabled the interview to flow as a conversation rather than a question, answer scenario ensuring the interviewee remained comfortable and relaxed.

The use of themes (i.e. history, stewardship, management) and open-ended rather than specific questions proved problematic as it allowed the interviewee to veer off topic. On the other hand it proved beneficial as it allowed the interviewee the freedom to direct the interview ensuring I was not shaping or influencing their answers. Essentially it became a free flowing conversation which included a component of story-telling. I determined that the benefit greatly outweighed the disadvantages and as a result continued with the method although I was conscious of the need to keep the interview on topic throughout subsequent interviews.

The only factor examined in terms of sampling strategy was the required age criteria of participants. Originally set at 60 years and over the pilot interview highlighted the fact that persons 45 years and older held significant knowledge regarding the springs and the issue of their cultural meaning. As a result, the pilot interview was included into the main study as well as the inclusion of other persons 45 years and older as potential participants. It also highlighted the need to converse with potential participants to gauge their knowledge.

The invitation letter, information package and Statement of Disclosure and Consent Form (Appendix 1) were found to be satisfactory upon discussion with the interviewee and only very minor modifications were made to them.

Interview Technique

A semi-structured interview technique was employed to encourage participants to talk about aspects of their lives and experiences in the form of a narrative (Willig, 2001). The primary aim of using this interview technique was to explore as Taylor (2005) suggests the 'insider perspective', to capture, in the participants' own words, their thoughts, perceptions and feelings. I opted to create an interview guide rather than a formal interview script that outlined the themes to be covered (Appendix 2), with questions remaining open-ended and flexible in order and wording. This ensured the

exploration of important issues as identified by the participants' as well as reducing any of my own bias and preconceptions, my role as the interviewer was to guide rather than direct the interview (Connor et al., 2001), allowing me the opportunity to "make sense of the multiple meanings and interpretations of a specific action, occasion, location, or cultural practice" (Liamputtong, 2009, p. 43). Most importantly, it acknowledged the role of the participant as the cultural expert and the interviewer as the person seeking particular cultural knowledge (Connor et al., 2001).

2.5.4 Interview Procedure

Interviews were face-to-face and conducted in June and July 2010, most taking place at the participant's home or a relative's home with the exception of one interview being carried out at a park upon the request of the participant (see Table 2.1). Three individual (Mr. Mallard, Willow and Greg) and two group interviews (Group 1: Nanna Iris, Helen and Brodeine and Group 2: Nanna Iris, Mr. Mallard, Mrs. Mallard and Willow) were carried out. A second unscheduled interview was conducted with Willow as a result of Mr. Mallard feeling unwell on the day of his interview. The 'Group 2' interview was conducted at the request of participants' who suggested it would assist in recounting historical details and/or events and issues they could not remember or forgot to bring up in the other interviews. It also allowed me the opportunity to ask further questions which arose from the previous interviews.

On arriving at the interview location I firstly inquired as to the health and well-being of the participant and their family, and this was reciprocated particularly concerning my mother. After making general conversation about various issues (i.e. weather and news) I set up the digital voice recorder and gave a brief reminder of the purpose of the interview and allowed the participant the opportunity to ask questions. I then collected the signed Statement of Disclosure and Consent Form and commenced the interview.

The interviews were limited to under two hours (with the exception of the 'Group 2' interview) because of the time needed to transcribe and analyse data. I continued to run the recorder after the main interview was concluded in case further information was given by the participant. It was also at this point I asked the participant if they had any historical documents or photos they thought might be relevant and would like to show me.

In order to cover all themes and allow for cross-interview corroboration attempts were made to ask similar questions, although specific questions were asked in response to statements made by participants. A list of the main questions is given in Appendix 3 and a full list of questions is given in the interview transcripts¹.

2.5.5 Transcription Process

I transcribed all the interviews verbatim using word processor with five minutes of recording equivalent to 20 to 30 minutes of transcribing. Because transcribing was an intensely time consuming activity sections within the interviews that were not pertinent to the aim of the study were not transcribed (i.e. interruption by family members, discussion of childhood mishaps and similar historical events). Once the initial transcription was completed I re-read each transcript correcting typing errors and highlighting words and names I was unsure how to spell. Each draft transcript was sent back to the respective participant to assess the truthfulness and spelling of the transcript. Upon the return of draft transcripts spelling mistakes were rectified and transcripts were finalised.

2.6 Data Analysis

Data analysis focused on interpreting the words and phrases contained in the six interviews. The analysis process involved coding, interpreting, comparing and combining data in order to as Rubin and Rubin state “extract the meaning and implications, to reveal patterns, or to stitch together descriptions of events into a coherent narrative” (2005, p. 201). Line numbers associated with cited quotations refer to the position of the quote within the transcript document of each interview.

2.6.1 Thematic Content Analysis

This study employed thematic content analysis, an approach that dictates the power of words over numbers (Liamputtong, 2009) aiming to preserve the context, structure, and detail of stories (Mankowski & Rappaport, 2000). Thematic content analysis is an interpretive approach where the researcher plays an active role in “identifying, analyzing and reporting patterns (themes) within the data” (Braun & Clarke, 2006, p. 79), as well as, constructing an understanding of the meanings attributed to individual

¹ The transcripts and interview recordings are available from the Battye Library, Alexander Library Building, Perth Cultural Centre, 6000.

experiences (Mankowski & Rappaport, 2000). Therefore it was important to consider what was meant by the term 'theme', Braun and Clarke assert that "a theme captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set" (2006, p. 82).

The steps involved in thematic analysis included familiarizing myself with the data, generating initial codes, identifying emergent themes by collating codes into tentative themes, revising initial themes developed and assessing whether they relate to extracted codes and defining and naming themes (Braun & Clarke, 2006). The analysis process was iterative and ongoing allowing themes and codes to be refined and analytical conclusion to be developed. The following section addresses these steps in greater detail.

2.6.2 Analysis Procedure

Immersion in the data involved intimately familiarising myself with the content of all five interviews. Immediately following each interview I replayed the recording during my two hour drive home. Upon my arrival home I made notes concerning the context in which the interview was held (i.e. inside or outside, the position of the interviewee in relation to interviewer and who else was present) and initial observations. Further immersion in the data was achieved by purposely deciding to personally transcribe each interview. Each interview was read and re-read although no formal coding was done at this time; only thoughts and impression were recorded. This process allowed me to focus on the overall content of the interview rather than on how particular statements might be coded.

Initial codes were developed by working systematically and line-by-line through each transcript, identifying and highlighting significant passages and/or phrases. Data was again read and re-read, recording observations and analytical memos (Liamputtong, 2009).

Once all data was initially coded, codes were then collated according to similar underlying potential themes (Liamputtong, 2009). It was at this point the relationships between codes and amongst themes were considered (i.e. over-arching themes and sub-themes) (Braun & Clarke, 2006). At the end of this phase codes that did not 'fit' or 'belong' to a theme were culled and placed in a 'miscellaneous' folder.

The final step involved reviewing and revising themes to ensure they were clearly identified in the data. This step as identified by Braun and Clarke (2006) involves two levels. The first involved reviewing all codes and associated data extracts to ensure all themes presented ‘coherent patterns’, if not they were re-worked or discarded. Level two involved considering themes in relation to the entire data set and whether or not they ‘fit’ into the overall narrative I was trying to tell, in relation to the research question (Braun and Clarke, 2006). An example of code and theme development as well as analytical interpretations is provided in Text Box 1

Text Box 2.1: Example of code and theme development and analytical interpretations

Passage taken from interview transcript of Willow:		
<i>There should be an interpretation sign or centre set there....Well what you do is, you'd have a path, you'd have it set up so that at certain times of the day or the evening...you take groups of people to it. You take school groups, you take official people, you given them the experience and try and given them an understanding of why we feel like this. (L. 755 – 779).</i>		
Initial reading	21/07/2010	
Initial coding	14/08/2010	<u>Economic opportunity (see underlined)</u>
Further coding	25/08/2010	<i>Economic development and promoting cultural understanding (see italicized)</i>
Analytical Memo	25/08/2010	Acknowledgement that the springs may be a source of both financial income and promoting an understanding of their culture and why they care for the springs.
Theme development	30/08/2010	A place for Individual economic gain
Overarching Theme	30/08/2010	Springs as a change of Livelihood

Qualitative data analysis was supported by use of QRS NVivo (Version 8) due to the quantity of data and analysis involved, the decision to use NVivo was made on the basis of the practical benefit it offered. The program enabled codes to be attached to segments of text, memos, and analytical comments to be recorded within texts and allow for easy retrieval of data (Willig, 2001).

Transcript referencing

A coding system was established to ensure quotes from interviews used in the results could be easily referenced to the appropriate interview transcripts (see Table 2.2).

Table: 2.2: Interview transcript codes

Participant	Interview Code
Mr. Mallard	M
Greg	Greg
Nanna Iris, Helen and Brodeine	G1
Mr. Mallard, Mrs. Mallard, Nanna Iris and Willow	G2
Willow	Interview 1: W1 Interview 2: W2

2.7 Rigour

Rigour was employed to evaluate and demonstrate the legitimacy and quality of the research (Tobin & Begley, 2004; Liamputtong, 2009). Tobin and Begley assert that “without rigour there is a danger that research may become fictional journalism, worthless, as contributing to knowledge” (2004, p. 390). The literature suggests that many methods are available to assess the validity of qualitative research. Lincoln and Guba (1989) developed four criteria to ensure the rigour of research: credibility, transferability, dependability and confirmability, criteria which Liamputtong (2009) suggests are widely known and remain the ‘gold standard’ that many researchers still use nowadays. The process by which these facets of rigour were addressed within this study are discussed below.

2.7.1 Audit Trail

The construction of an audit trail was employed to enhance the study’s credibility, confirmability and dependability. Credibility refers to how ‘accurate’ the participant’s constructed reality is represented by the researcher (Schwandt, 2007). Confirmability refers to the “degree to which findings are determined by the respondents and conditions of the inquiry and not by the biases, motivations, interests or perspectives of the inquirer” (Lincoln & Guba, 1985, p. 290). Finally, dependability questions the compatibility of the research finding and the data from which they were derived (Liamputtong, 2009).

The audit trail explicitly and transparently documents the research process over the length of the study (Miles & Huberman, 1994). Detailing the epistemological and theoretical framework the study was set in, to the development of the research question and chosen methodological approach, through to data collection and analysis as well as the interpretation of findings (Liamputtong, 2009). It also clearly highlighted the relationships and linkages between themes and the existing literature (Lincoln & Guba, 1985). Furthermore the continual process of reviewing and revising themes and research findings, documented in the audit trail was also carried out to enhance the study's credibility and dependability (Braun & Clarke, 2006).

Central to the audit trail was the process of reflexivity, a method that transparently dictated my own positions and personal reflections as the researcher. It acknowledged the integral role I played in shaping and interpreting data and how personal background, experiences, biases and beliefs may have influenced the research (Angen, 2000; Liamputtong, 2009). This form of critical self-reflection was a springboard to assess the relevance and value of the research and develop further understandings (Liamputtong, 2009). A reflexive diary was maintained throughout the study, detailing thoughts, concerns, biases, data interpretations and understandings as well as aspects of self-evaluation.

It is not the intention of the audit trail to assist others in reproducing the study's findings, rather it sets out a logical and traceable process that can be made sense of (Padgett, 2008). Information pertaining to the audit trail was thoroughly described within this thesis and is aided by the reflexive journal (available from the author on request).

Transferability refers to the extent findings can be generalized or applied to other settings (Tobin & Begley, 2004). The social constructionism episteme on which this study is based on, acknowledges that realities and meanings are context-bound (Engler, 2004). Therefore, transferability focuses on conclusions under similar social, political, economical and environmental conditions (Padgett, 2008).

2.8 Ethical Consideration

Approval for this research project was granted by the Edith Cowan University Human Research Ethics Committee (HREC) as it was deemed to meet the National Statement on Ethical Conduct in Human Research.

On receiving ethical approval for the project potential participants were contacted via letter inviting them to consider participating in the study. The invitation letter was accompanied by an information package that explained the purpose of the project, outlining the nature of their involvement and welcoming any queries (Appendix 1). Informed consent was obtained via a Statement of Disclosure and Informed Consent, that highlighted possible concerns of participants, their inherent right to withdraw from the study at anytime and the option to remain anonymous in relation to the use of their transcript in the study. Participants who agreed to take part were briefly explained the purpose of the study and their involvement and asked if they understood prior to the commencement of the interview. Participants were also asked whether they would allow their name to be published in association with their interview. All participants gave formal written consent for their name to be used.

Interviews were personally transcribed and sent back to each participant to ensure the transcript was a 'truthful' representation of their interview. All participants agreed that their transcript was a 'truthful' representation with the only concerns being grammar and the spelling of people's names and places. All spelling errors were rectified.

Over the course of the project participants were contacted via telephone and given project updates. As outlined above, a commitment was made to provided each participant with a finalised copy of their interview transcript, and also a copy of the thesis upon completion. Dissemination of the thesis to organisations, agencies and the general public will be done at the discretion of participants. Interview recordings and transcripts will be stored in a secure place, in accordance with the requirements of HREC.

2.8.1 Technical Advisory Committee

To further enhance and guide the ethical appropriateness of the research project a Technical Advisory Committee (TAC) was established as part of the ethics approval granted by HREC. Consisting of Kurongkurl Katitjin Head of Centre Professor Colleen Hayward, Dr. Noel Nannup and Cultural Awareness Officer Jason Barrow, the TAC was established and functional prior to the commencement of any interaction with participants.

In consultation with members of the TAC the purpose of the committee was to provide support and guidance to the researcher concerning cultural, technical and scientific issues related to the study, as well as providing recommendations that would update, expand and improve the quality of the study. Over the course of the project the TAC focused on issues of participant confidentiality, appropriate sampling strategies, interview transcript storage and access and the need for researcher reflexivity. Particular attention was given to ensuring the most appropriate interview a method and technique was used. As a result a semi-structured interview technique that focused on the importance of creating free flowing dialogue between researcher and participants was employed.

The TAC was an invaluable source of information for a greatly inexperienced researcher carrying out her first research project.

2.9 Conclusion

The qualitative research design employed in this study ensured emphasis was placed on the complex and dynamic nature of language and the relationship between people, culture and nature. The design promoted the importance of the interpretive process and the role people play in the construction and interpretation of meaning. A semi-structured interview technique enabled the participants to discuss issues that were important to them, significantly reducing any impact I may have had on shaping the content of the interview. Analysis of the transcripts via thematic content preserved the context, structure and detail of the interviews, ensuring a 'truthful' representation of participant comments. These factors are clearly displayed in the following result chapters, highlighting the meanings that participants invest in the springs as a result of interactions with their surrounding environments.

CHAPTER 3

Freshwater Dreaming - Beemarra

The following story is the Dreamtime story for the Nanda people. This story dictates how the Murchison river and the freshwater springs dotted throughout the landscape were made. This story was told to me by Mr. Mallard and Willow.

Long, long ago, a freshwater snake called the Beemarra created the Murchison river. As the Beemarra travelled down the river it could hear a roar out to the west and became intrigued by the sound, so it burrowed its way through and out to a place called Nunginjay. As the Beemarra burrowed it left fresh water and when it came out it realised that it was the ocean and the waves that were making all the noise. However, the Beemarra was terrified by the enormous waves and fled back through the hills to the safety of the Murchison River. As the Beemarra fled, it rested in many places, leaving freshwater where it had lain. The Beemarra continued to travel out through Oakajee river and then back down the Greenough river and finally came to rest at Ellendale pool, where it still remains today.

Structure of the results

The following chapters detail the results of thematic content analysis carried out on participant interviews. The results of the analysis have been organised into three distinct but overlapping chapters according to the overarching themes to have emerged from the analysis. In Chapter 3 'Springs as a change of Livelihood' evidence is presented that suggests historical government suppression and the need to adapt to a modern society are key drivers behind aspirations of economic development. Chapter 4 'Springs as a vehicle for Political Expression' details the political activities participants are currently involved in as a method of ensuring continued connection to 'country'. Finally, Chapter 5 'Springs as a vehicle for the Continuity of Culture' discusses 'why' and 'how' participants have adapted to a changing social environment to ensure the continuity of their culture.

SPRINGS AS A CHANGE OF LIVELIHOOD

3.1 A Place for Individual Economic Gain

The following section discusses the way in which aspirations of economic development and employment are imbued into the meaning for the springs.

3.1.1 Economic Development

In the past the springs were utilised for various activities such as a place to socialise, an area where hunting and gathering was carried out and a water source for sheep and cattle. Prior to 1954 and the introduction of trucks as the main source of transportation for sheep and cattle, many Indigenous men were drovers. Drovers would move sheep and cattle between Tamala Station in Shark Bay and Murchison House Station en route to Northampton (Mitchell, 2009). Mr. Mallard explained that the springs were used for stock watering in the past by the drovers 'coming down from Tamala' (G2, L.918).

Nanna Iris described in detail how they 'knew some of the places and [would] go around...picking...bush tucker (G1, L.424). Willow graphically described how there are 'huge pools...on the river system...[which] you can get bream out of' (W1, L.435). Furthermore Mr. Mallard detailed how they would get their bush tucker from the area surrounding the springs:

A lot of bush tucker over there [you can go and]dig up adjigos (yam) (M, L. 742) We used to go shooting a lot of kangaroo and hunting (M, L.347) Get kangaroo...cut it into oxtails...burn all the skin off [and] chuck them in leaves or wrap them up in kangaroo skin and put them in [the fire] (M, L.743).

Other than utilising the springs for watering stock and gathering bush tucker participants' comments imply that there has not been other activities carried out for livelihood or economic purposes. Economic development by Indigenous peoples was purposely suppressed by Government and society. Participants expressed a mixture of anger and dismay when explaining how their fathers and grandfather were refused the right to own land and suggested as Mr. Mallard explained 'the government gave land to white settlers, they gave it to them' (M, L.376). Willow further stated that when his Grandfather's 'sons came back from the war they had the land swap...because the

Mallards were Aboriginal people we weren't allowed to have the land, yet [Grandfather] Charlie applied for land and it was rejected' (W2, L.742 – 750).

Helen solidified these desires to own land by explaining that Grandfather 'Charles wanted to buy land...he had a letter from the Commissioner of Police saying what a great family. Well he couldn't buy land because of one farmer...they wanted to buy land and then the person next-door said no. They didn't want natives owning land next to them' (G1, L.901 – 907).

In reflecting on this as Mr. Mallard suggested the rejection of land applications occurred because of the presumption that 'Aboriginal people...only wanted it for hunting' (G2, L.1104) as 'he was a kangaroo hunter and he only wanted the land for his family' (M, L.379). This comment Mr. Mallard stated was in a report that led to the eventual refusal of his Grandfather's land application. For Mr. Mallard this implied that society and government at the time perceived Indigenous people incapable of long term sustainable economic development.

Those same feelings of anger and dismay were expressed as a catalyst for the current state of Indigenous economic development and the lack of access to resources. Mr. Mallard points out that because a caveat has been placed on his family farm he cannot maintain a viable source of income. 'You can't use that farm to borrow money off the banks or any financial institute to better yourself, so you're in a no win situation' (G2, L.1116 – 1117). He expressed a feeling of hopelessness at not being able to develop a sustainable source of income because 'you can't get out of the box the government got you controlled in that box. They give you little bit of money [so you] can just keep your head above water and that's it...our hands are tied, you know, our hands are tied' (M, L.1026 – 1028).

Helen indicated she was currently facing the same struggles as her forefathers in the fight for land and the ability to develop a long-term source of income and that in the past Indigenous people wanted to purchase land [and] 'today we want it for free...and they say blackfellas just want everything for nothing...well they wouldn't let [Grandfather Charles] buy it and it's not for free it cost a lot of blood...and that still carries on' (G1, L. 901 – 916).

It seems for these participants that the springs are now viewed as a potential source of deriving an economic income in a modern society as a result of previous historical injustices. The meaning of the springs was now an opportunity for the participants to regain control of how their economic future is foretold in local economies. It seems a significant relationship exists between the evolution of cultural meaning and aspirations of economic development for this group.

For example, Mr. Mallard proposed that by knowing the cultural stories associated with the springs and surrounding area that it would be a perfect location for starting a tourism venture:

Go into tourism venture, this right here for tourism here, because you got all the infrastructure there now. You can go to Kalbarri one day and back down to Port Gregory, Wagoe and then you come back making a day trip but you got to map it all out first. Next day you can go in the wildflower season you can go that way toward Coolcalalya through to Yellalong and back down the Gascoyne Murchison road to Mullewa, you know.... You can do a hundred and one things with this place, you got it there and I know all the stories, about the rivers, springs and the caves (M, L.1014 – 1025).

The springs meant a site by which future economic independence can be achieved. For Mr. Mallard by viewing the springs as a potential source of income, living condition can be improved and a reliance on government welfare reduced. As Mr. Mallard indicates it is important that they gain 'self-independence [and] self determination' (M, L.989) and that they find 'a way out of government hand outs' (M, L.993).

The evolution of economic development as a component of culture was two-fold. It arose not only from the need to develop economic independence but also from the potential threat of economic gain by non-traditional owners who may take advantage of their cultural resources and appropriate their knowledge, as Helen explained:

They want the stories...at Kalbarri they want the Aboriginal art...they want the information. They want to do the tours to the sites and things that are there but they don't want any actual involvement from Aboriginal people (G1, L.664 – 667).

This suggests that cultural meaning invested in the springs has evolved into a battle over economic gain and is clearly demonstrated by the participants' comments.

Although this theme emerges strongly from this study, participants' comments were complex. 'Historical injustices' were one potential driver of this notion of the springs as a source of economic gain and self-independence. I contest that developing an understanding of the historical past is integral to developing an understanding of their future economic aspirations.

3.1.2 Expressing a need for Employment and Cultural Training

Closely entwined with aspirations of economic gain is the notion of the springs as a source of potential employment in the area of natural resource management. In this context employment becomes a 'cultural occupation', which based on participants' comments, was not evident to have existed previously. This employment opportunity was complex, it included the need for monitoring and management of the spring sites, a perceived lack of cultural training in the field of natural resource management, an inherent cultural right to employment and an opportunity for joint management with local organisations.

For example a number of participants reflected on the need for Indigenous employment in the realm of natural resource management. Mr. Mallard expressed the need for 'a full time job, patrolling all [the springs]...The government department should be able to pay somebody that's living over there, to just keep an eye on it and you'd patrol them' (M, L.953 – 957). Whilst Greg expressed his disappointment at being unsuccessful in gaining assistance from the government to 'care' for the springs:

What I been trying to do for several years now is get some sort of help from some sort of Aboriginal department to go and look after all these places... and to monitor them and go and check on them every month or every two, three months or something (Greg, L.205).

Helen strongly indicated that such employment is an inherent cultural right for the Indigenous people of that area; they should be given the first opportunity for training and employment:

It's got to be Aboriginal people of course, it's got to be Indigenous. The rangers I think [should be] the people of the area, which is something that should be done. That [they] know their area to have the first option of being a ranger and being able to have that training (G1, L.1520 – 1523).

The employment opportunity that participants' advocate linked directly to a perceived lack of culturally trained people who are charged with managing such sites as Helen discusses:

So you need to have trained people for that because there is a possibility of being something anywhere, like a burial site or anything, anything at all could be there. So these rangers should be trained when they go out there (G1, L.1506 – 1510).

For example Helen firmly stated that 'people need to know' and be 'able to recognise artefacts...and sites because if there is artefacts [present] there is a waterhole or something there of significance' (G1, L.1541 – 1544). She explained further how she would be quite capable of driving through the bush collecting rubbish but would not be capable of identifying sacred sites and that is what a 'ranger' needs to be capable of doing (G1, L.1544 – 1550).

She was pragmatic and recognised that if an Indigenous person of that area was unable to fill that role then 'somebody has got to do it, but that other person should still be trained' (G1, L.1524). Training, which she suggested should, be 'done with people who do know the area and they do the traditional thing and they know what's around, so they would have the knowledge' (G1, L.1528 – 1535). Local Indigenous traditional knowledge is needed in order to create successful employment.

The participants were not expressing an individualistic motivation; as Greg sees it as an opportunity for 'people [to] work together...not distant each other...come together and work together' (Greg, L.415 – 418). This could possibly be achieved by 'the Shire council employing an Aboriginal person' (Greg, L.287).

Willow presented a similar view stating that 'it should be joint management where there's an equal portion of traditional owners and other agencies involved' (W2, L.204 – 213). The overall impression given was that there is a greater need for Indigenous and non-Indigenous people to work together through joint initiatives with local organisations. It must be stressed for them the maintenance of the springs was the primary concern and they called for a collaborative effort.

This is further evident throughout the data. For example, the need for their involvement is proactive and resulted from the continual observed desecration of springs sites as Willow recounted how 'they've gone there and destroyed it and

they've destroyed it by either urinating in it or driving their vehicles over it, throwing their rubbish around or just graffiting the area' (W1, L.542 – 545). Greg also describes how he has witnessed people 'urinate...in [the] spring [and that] it's full of broken glass and bottles' (Greg, L.150), as Mr. Mallard simply describes they are just 'full of rubbish' (G2, L.919)

The participants' comments suggest a growing sense of need for the opportunity of employment by government departments in relation to spring management. This employment opportunity is expressed as a inherent cultural right of traditional Indigenous people of the area but also a pragmatic desire to protect the springs in the most direct way possible. Not only does cultural meaning take on an economic undertone but within that there exists a noneconomic opportunity to educate the wider community on the importance of culture which did not exist previously. As Willow suggest:

There should be an interpretation sign or interpretation centre set there so that it's controlled that people go there and have a look and it's fully controlled and maintained and the ecological system, the water system, our spiritual connection, our religion is all maintained and protected' (W1, L.753 – 758). Take groups of people to it. You take school groups, you take official people, you give them the experience and try and give them an understanding of why we feel like this' (W1, L.780).

In discussing the springs as a means of deriving an income in a contemporary world two entities have evolved. I observed firstly, the notion that the springs can be a particular form of livelihood distinct from ways in which they contributed to livelihood in the past, and secondly, the contemporary world has changed and in it, so has the participants' understandings and acceptance of what is required to sustain oneself. In particular participants' acknowledge their inherent obligation and right to 'care for country', at the same time viewing this obligation as an opportunity to secure employment in the natural resource management sector.

CHAPTER 4

SPRINGS AS A VEHICLE FOR POLITICAL EXPRESSION

Following the economic theme a critical theme to have emerged from my analysis is that places often become imbued with complex political meaning. Places become vehicles for political expression and avenues through which personal identity can be reaffirmed. The following section discusses the ways in which the springs have evolved into a political symbol that participants must use to articulate their rights as traditional owners.

4.1 Influence of historical events on issues of Equity and Justice

4.1.1 A Need for Balance between Indigenous and Western Law

One way in which politics was expressed was as a need for balance between Indigenous and Western law. In order to make sense of the issue we must first gain an understanding of the participants' concept of law as defined by the group. Willow suggested the foundation of Indigenous law is based on both sacred and spiritual principles. It is both a current yet ancient system of law given to the Indigenous people by the Dreaming spirits and land. Willow relayed his family's Dreaming story of law and how it connects the ocean, rivers and stars:

Two brothers Bula and Guda, Bula Guda in the evenings they came and they danced on the rocks there at Kalbarri at the Mouth on the river. They told the law for the day what the law would be and who would reign supreme for that day over the Nanda people in our area. In the evening they flew off and they become the evening star that's why they appear so close in the star. So the ocean, the river, and the star system all have that same type of connection to us (W1, L.62 – 67).

For Willow, Indigenous law is complex and interconnected and he described that they 'have women's law.... men's law, and kid's law too' (W1, L.375), where the law is unique and difficult to generalise, dictating individual behavior and actions :

The Aboriginal laws, in our society I can only talk about our society. Our society had laws which protected what you can and what you can't do and the certain times in the year you can do things and you couldn't do things (W1, L.601 – 603).

To Mr. Mallard there is a complex nature of Indigenous law and a disruptive imbalance between Indigenous and Western law systems which arose as a direct result of colonisation and the practice of political oppression by past and current governments:

The whiteman's law in the early days, colonial days, you blame the government of the day and even the government now. They took them away and they wanted to cut out Aboriginal people and put them all in missions (G2, L.1038).

Willow stated as a result of being politically oppressed and the imbalance between law systems that their 'law systems completely collapsed' (W1, L.604). This imbalance has perpetuated a sense of powerlessness which was articulated by Mr. Mallard who stated 'we got blackfella law and white law to look at [and] we don't know where we are half the time' (G2, L.187) and 'I don't know how you're going to reach a balance to tell you the truth' (G2, L.1015). He was suggesting that they feel as if they have almost no option but to abide by a legal system which inevitably nullifies their own traditional rights. Not being permitted the right to camping or occupying their traditional land exemplified this reasoning, as Mr. Mallard explained:

If you can't camp there you more or less [have] no rights. They [have] taken away your traditional rights of camping and hunting there it makes it very, very hard (M. L.845 – 847).

Willow's comments support this claim in stating 'we have no authority ...of going anywhere near those springs under whiteman's law...[It] is managed by the local government...they control it [and] we've got no legal protection over that area (W1, L.689 – 694).

It is interesting and important to note that the participants argued based on their cultural ownership that they feel the onus is on them to rectify this perceived imbalance as Mr. Mallard notes 'the Aboriginal people have got two balances to make up' (G2, L.201). This imbalance has evolved into one aspect of political expression and again is demonstrated by the participant's comments in relation to development around the springs, as Mr. Mallard notes:

The Shire wants to develop around the springs and that is very delicate because they are messing up our watercourse...but we still [have]to go through the process of agreeing with the whitefella's side of the things for development (G2, L.211 – 216).

He further states that ‘without any authorisation’ the ‘Shire put down a bore and...took all the water stopping it from flowing into the spring’ (G2, L.987 – 990). He also indicated that the same imbalance applies to accessing springs located within Kalbarri National Park:

There's some springs on the National Park, they have a National Park for people to see... [T]hey say ‘people [are] trying to go out there without four wheel drives and they get stuck out there in the sand and they perish’. But they blocked the road off for everybody and you can't get out to see your traditional stuff. It's all controlled by government it's very, very hard for Aboriginal people, very hard (M, L.870 – 876).

Cultural meaning was at the forefront as Mr. Mallard highlighted that they do not have any intention of stopping development from occurring that an economic and cultural meaning now sat side by side. He expressed a sense of urgency:

We don't want to stop development... but we'd still like to protect our Aboriginality... to protect our springs. They only put a little fence around it where you can just swing a cat. It's very delicate, that's what I mean, you got to have two sides to balance, the white side and the black side...they [have] got to look at our side too (G2, L.220 – 225).

Thus collaboration was the desired way forward in order to rectify such an imbalance, Willow advocated ‘joint management where there is an equal portion of traditional owners and other agencies involved’ (W2, L.212). He drew attention to the importance of this because they ‘believe the laws that were back then [and] the laws we have today in Aboriginal society...enables us to protect some areas’ (W1, L.608 – 609).

4.1.2 A need for Equitable Development, Identity and Policy

As suggested earlier the primary motive for the group was care. A key point for participants was that increased levels of development in Kalbarri over the last ‘fifty to sixty years’ has lead to the desecration of springs. For them this is a movement for equity in development or ‘equitable development’ and has taken root in the cultural meaning for the springs. Conditions for achieving ‘equitable development’ as

indicated by participants should include the cultural requirements of the traditional owners and be planned in such a way to ensure that development promotes the continuation of their culture. In order to understand the concept of 'equitable development' discussed here I must first explain the key phases of development as identified by participants which also shows the deep historical connection the participants have to the springs and their interest in the protection of the springs.

Only the three participants over the age of sixty described Kalbarri prior to settlement by non-Indigenous people, suggesting a timeframe of fifty to sixty years before non-Indigenous settlement began. Nanna Iris pointed out that Kalbarri 'use to be called the Mouth of the River' (G2, L.737) while Mr. Mallard explained that 'most of our early days as Aboriginal people we camped along the [Murchison] river [which also included] cleaning out all the springs' (G2, L.8 – 9). Mrs. Mallard then noted that they predominantly camped opposite where 'the Post Office' is located now at 'that spring across the road' (G2, L.708). Because that was where 'we use to get our drinking water from' (G2, L.719).

The same participants described the landscape at the time as 'all bush' mainly 'wattle bush'. Nanna Iris simply explained that 'it was all bush' (G1, L.1001) but that it was 'clean' country (G1, L.1005) and Mrs. Mallard provided similar comments describing it as 'thick bush all around' (G2, L.760). Mr. Mallard suggested that it was 'wattle bush' (G2, L.762), but he also relayed what the non-Indigenous perspective of camping there at the time was:

A lot of the old farmers around here years ago [would] say who'd want to camp over there in that old wattle bush, with all the itchy caterpillars [and] all that black sand (G2, L.762 – 764).

Mr. Mallard said that as non-Indigenous people began visiting Kalbarri there 'would have been one or two old sheds but not many' (M, L. 239 – 242). Nanna Iris responded similarly indicating that 'it was more or less like shacks, nobody...actually...lived there much' (G1, L.636 – 638) 'part from may be a few shacks, people use to just go and camp there' (G1, L.1148).

The first phase of development in Kalbarri began with those non-Indigenous people who started camping and building small tin shacks in order to enjoy the benefits of a

somewhat secluded paradise. Participants had observed both social and environmental changes occurring only in the last forty to fifty years. For example, Mr. Mallard suggested that changes have 'only just [occurred] lately, over the last forty [to] fifty years' (G2, L.2151) A similar response was given by Willow who also suggested that changes started to occur over the last 'fifty so years' (W1, L.540).

Mr. Mallard said that is was 'after' (G2, L.702) Kalbarri began to develop, 'when all the building started' (G2, L.729) along with the '[crayfishing] industry and... it being made in to more of a tourist destination' (M, L.417 – 418) that the changes were noticeable. Comparably Nanna Iris noted that:

[It is] a lot different [now], they've got all the houses... there now [and] all the boats, where they do all the fishing and there was nothing there, part from may be a few shacks (G1, L.1145 – 1148).

Both Mr. and Mrs. Mallard claimed that after Kalbarri began developing they were no longer allowed to continue camping where they had been previously. Mr. Mallard stated that 'they won't let you camp anywhere along there (the Murchison river) now' (G2, L.717) and that if you do 'they'll get the police on to you [and] hunt you off' (G2, L.2207). Similarly Mrs. Mallard explained that it was 'when all the building started [and] Kalbarri started getting developed' (G2, L.727), they made camping illegal. Essentially Mr. Mallard noted:

Back then we had more freedom, you know. Now you are more or less blocked, not blocked out entirely but you are more or less blocked out of the place (M, L.417 – 421) *and the more progress the...less land Aboriginal people have got* (M, L.374).

With this history participants could define the issue of equitable development as an aspect of political expression. The participants discussed the gradational changes in spring health away from Kalbarri's central business district (CBD), indicating that springs which are located within close proximity to Kalbarri's CBD have been significantly more affected by development than those located further north, Willow describes the changes:

It's changed...the ones closer to town they [have] basically been destroyed. They put in bore systems and drained the spring and took the water away or they put up fences...which attracted people who haven't got an understanding of culture and they've gone there and

destroyed it...The other ones further up the river they are basically still the same. Even all the floods that came down over that fifty years they have not changed the position of where those springs are, those springs are still there (W1, L.540 – 548).

Greg said:

There's a lot of difference (Greg, L.182). That soak down there Gidamarra it's [full of] rubbish, people urinate in it [and] that's because... it's there on the town's doorstep so naturally they are going to. The ones further up the river Long Spring and Paradise they are the same (Greg, L.171 – 173), they are still in their natural state (Greg, L.183).

Similarly Mr. Mallard commented on the change in springs health moving north away from town:

Some of them [are] still in their natural environment like Long spring...and you go further up to Paradise spring, it's still [in its] natural environment. But the... two in town they've been desecrated, you know, filled up with rubbish (M, L.476 – 480), and they put a cage over the top of it but they never cleaned it out (M, L.323). [They] block them up and...they build around them and it's all in the name of progress. That big word progress (G2, L.2191 – 2192).

It was here that Mr. Mallard expressed a sense of bewilderment at the level of development and its effect on the springs and their identity as Indigenous people:

Now look at it! All developing, all spreading out (G2, L.768). That will be progress and you talk about the springs with a lot of [the] springs, in the future we are going to lose [those springs] (G2, L. 1964 – 1965). [Because] it's slowly changing Kalbarri is creeping up the river, progress they call it (M, L.357) and we protect them as much as we can [but] with the progress going on it makes it very, very hard (G2, L.2292). So what do you do [our] Aboriginality...is slowly being eaten away. But what we'd like to do is protect some of it, most of it anyway, if we can and it's very hard to do (G2, L.233 – 235).

As suggested earlier participants did not present a naïve perspective concerning 'development' nor did they say they wanted to 'stop development'. Greg succinctly summarised the comments of all participants by stating 'I know you can't stop progress' (Greg, L.409) and as Mr. Mallard quite pointedly stated 'how do you stop it, [you] can't, we all use houses' (G2, L.1975), acknowledging that they actively take part in the process of development, rather based on their historical connections they take issue with the extent of development taking place in Kalbarri, as Mr. Mallard

explained:

So in time...there's going to be a big dispute over... development because I think they nearly went as far south of Kalbarri [as they can], so naturally they [are] going to develop north along the river (G2, L.1954 – 1956).

This was again cultural as Mr. Mallard argued that current development does not reflect the 'Aboriginal way' or take into account the cultural importance of particular sites. In the example he gave below he believes those who are quite capable of funding 'equitable development' choose cutting costs over ensuring the Indigenous culture of an area is maintained:

...you [have] only got to look at the Burrup Peninsula with that rock art. Some of the oldest in the world and they picked it up with loaders and pushed them out of the way so they could put a fence or pipeline through. So you can't tell me they are not going to damage [it] that's wrong, that's not [the] Aboriginal way, to push them out. All the money they had they could have built a pipeline around it, without disturbing it (M, L.463 – 478).

Thus throughout the data participants advocated the need for 'equitable development' encompassing both Indigenous and non-Indigenous cultural values. This is needed in order to protect the springs physically and the participants' identity which is inherent in the springs. Thus cultural evolved to political and the two joined together.

The need for protection not only for the springs but for the entire area in order to protect their identity was expressed by Willow:

Our identity goes to our cultural resources of those caves, the ocean, the rivers, the pools, the food, the animals and no one wants to protect them that's the feeling we get (W1, L.589 – 590).

Policy creation as key method of controlling the extent of development was proposed strongly by Mr. Mallard:

Well there should be something in Parliament or somewhere to make sure you put a decent enough patch around it to [protect] it, because they are very important springs (G2, L.999 – 1002).

Willow's opinion differed slightly; one of direct action by calling for common sense to prevail and a need for more individual political action on the issue of development:

...there has to be a certain part to say hang on enough's enough now and no one's prepared to do that. The system the so called system is protected no matter how wrong or how many lies get told, that system is protected. I'm hoping to expose the wrongness of that system and how it is protected by the academics and the professionals, that's what I want to do (W1, L.591 – 596).

4.1.3 Distrust of Government, loss of power and Identity

Stemming from the participants' need for a balance between Indigenous and non-Indigenous law and 'equitable development' there was expressed a deep-rooted distrust of government and associated agencies for past imbalances. Historically the greater part of their distrust has been aimed at Federal and State governments, for policies implemented which resulted in the devastation of their culture. Participant comments highlight a shift toward a more local level of distrust.

Mr. Mallard expressed distrust and anger over the continued oppression of Indigenous people by government and its negative effect on identity:

The powers to be like the government...in Australia don't want Aboriginal people to get educated, that's my personal opinion. They don't want to you to crawl out of that box, they get you in a box and if you're getting a bit of education you'll buck their system, they don't like that. Push your head back down... because I been through it and it was hard (G2, L.2029 – 2036). It's a control thing... [and] that's why the government try to keep you in the one box. So it's hard to keep your Aboriginal identity, we do our hardest...to keep it (M, L.883 – 886).

Similarly Helen described how the historical oppression of indigenous people is still present today:

They want you to come into this white society but as long as they [have] you in your little corner (G1, L.339 – 340). [In the past] you weren't allowed to do it so you didn't. Even though things are changing it is still like we are trapped in that thing of doing what you are told (G1, L.261 – 262). It's still happening today...and the government has assisted in taking that away...what do they want, they want everything (G1, L.935 – 936).

Willow became animated when he bluntly described what he believes is the current situation in Australia in relation to government and Indigenous people:

The Australian government [has] got the blacks under control... and they do have us under control, no doubts about it. We don't agree to a mining proposal the government just acquires

the land by compulsion (W1, L.334 – 338).

This local level of distrust is predominantly expressed through the springs as meaning. It is evident when the ‘springs’ became transformed from a discourse of ‘traditional rights’ and ‘identity’ into issues of ‘power’ and ‘control’. From the participants comments it was evident that the springs have now become a focal point for expressing distrust but also for using the springs and the system’s interest in developing the area where the springs are located, as a vehicle for further engagement in the political sphere, as Willow explained:

The area where the springs are located is vested in the Shire, in the local government and... we have no authority over them. We don't have [any] authority of going anywhere near those springs under whiteman's law. The only authority we have as Aboriginal people...[is] our culture...we just go there and do it because that's the protection that we want to give them. Now [it] is managed by the local government, they run it and they control it we've got no legal protection over that area (W1, L.688 – 693).

In real terms Mr. Mallard detailed the hardships they now endure wanting to access the springs:

It is making it very hard now even to camp along the river because the Shire's got control of it. They put signs everywhere 'No Camping' you'll be fined for camping you are not allowed to camp in that area. Each side of the river is vested in the Shire of Northampton so it's all controlled by government (M, L.510 – 514). [Therefore] you can't get out to see your traditional stuff...it's all controlled by government it's very, very hard for Aboriginal people, very hard (M, L.874).

Greg expressed the ‘wrongness’ at not being allowed to camp near the springs and occupy the land of his ancestors:

See they got signs up out there you're not allowed to camp.... You have got to camp five hundred meters off the Murchison River which is wrong (Greg, L.459 – 461).

Such ‘control’ has lead to negative effects on both spirituality and traditional rights as evident in participants’ comments. Willow conveyed the negative effect of control on identity and spirituality:

[So] it affects us because we want to camp next to the springs but because the area is managed and controlled by local government you're not allowed to camp there. So you

[have] to camp away from the springs so it breaks your spiritual connection of closeness (W1, L.696 – 700).

Mr. Mallard emphasised:

They have taken away your traditional rights of camping, hunting and fishing. It makes it very, very hard (M, L.845 – 847).

Helen's comments supplied further examples of distrust in relation to government and traditional knowledge:

Who [are] they going to believe it's written in black and white...so it doesn't matter. Whatever's black and white and it's done by the Government true story and that's it. That's why within families they do keep their secrets because who's going to believe you anyway, no one. It's told and it's done how many times I mean we're coming up against that very thing ourselves (G1, L.1099 – 1104). *Because we can say we've got this register of sites and then that site that we know about but haven't told [degrades]. So you can't see that it's there not like some [that] are very clear... but we didn't register it. So [to] the government...it doesn't look like there was anything there even though we know that it's been passed down. The government can go ahead and do whatever they want, well look they do* (G1, L.1113 – 1121).

Here a dichotomy exists between the level of credibility given to written government knowledge and that of traditional oral knowledge. In turn Helen suggests this leads Indigenous people to 'keep their secrets' for fear of not being 'believed'.

Helen concisely summed up by stating:

Because it's like everything we know the government should know and if we haven't told them something, well it didn't happen. Because it's not recorded it didn't happen, simply as that (G1, L.1127 – 1129).

Helen's comments were a political discourse for acting with more autonomy having clearly defined arguments, objectives, methods (i.e. squatting, Native Title) and future outcomes (i.e. ownership of land, indigenous employment, sustainable source of income). She argued the situation regarding government dismissing or appropriating Indigenous knowledge cannot occur because they have put in safeguards against that happening by getting personally involved and taking action against such acts.

The overarching theme of 'springs as a change of livelihood' and the sub-themes of 'a need for balance between Indigenous and non-Indigenous law', 'equitable

development' and 'distrust of government' were most actively expressed through the sub-theme of 'Native Title, friction and identity'.

Native Title in cultural meaning was expressed as a double edged sword. On the one hand Native Title was expressed as a wall created by Government for the intention of suppressing identity and controlling lives. On the other hand Native Title was expressed as a process by which Indigenous people can assert their cultural identity and gain legal recognition from the government.

Thus participants expressed skepticism over the supposed benefits of Native Title to Indigenous people and considered whether it was nothing more than a repeat of past injustices. For Mr. Mallard, Native Title exhibits many similarities to the 'stolen generation' (M, L.1975). He also expressed bewilderment at the similar process by which Indigenous people are subjected to in order to prove their identity:

It's a mix up for Aboriginal people... I reckon Native Title is the worse thing since the stolen generation, that's my own opinion. It's caused too much friction amongst Aboriginal people. If you're Aboriginal and you [have] to prove that you should be allowed to do that. They must know by looking at you and you telling them you're Aboriginal and [having] a few documents, that's it. But you [have] got to prove [that] you come from that land and what you [have] done there. A lot of it is hard to prove because... a lot of people will not let you on their land. They [have] got gates to keep you out so it makes it very, very hard (M, L.775 – 788). That's why with Native Title they said you [have] got [to have your] traditional ways, well how many blackfellas [do] you see going around chasing kangaroos with a spear (G2, L.1975 – 1978).

Helen also described the fundamental flaw inherent in Native Title, suggesting that past policies inflicted on Indigenous people inhibits many from being able to provide the required information:

Native Title was supposed to help people I think it's the biggest racist act ever written. You've got to have your language, your dance, you've got to have all that, you've got to be culturally as they see it, connected. How can you have a language if you're told that you cannot speak it. We are a classic in regards to Granddad not being allowed to so then of course Mum didn't, then Mum doesn't know so how the hell is she going to teach us. It was taken away and yet the government wants you to produce this (G2, L.752 – 760).

In this context Native Title was connected directly to the meaning of the springs Willow discussed the current situation with the springs in relation to Native Title (W1, L.688 – 693) *see quote on page 50*). I inferred from his comments that because they have not been recognised as traditional owners they have not been allowed a voice in regards to management of the springs or the surrounding area.

The Native Title claim that has yet to be determined is the Nanda claim. Participants identify as Nanda people and are part of the claim extending over Nanda traditional land. What was evident from Mr. Mallard's comments is that a high level of friction currently exists within the claim:

Native Title upset a lot of families within Nanda, I'm only speaking on behalf of Nanda...it causes a lot of fights and friction within families (G2, L.250 – 256). Friction between families between relatives, cousins, aunties and uncles (G2, L.265 – 266).

In response to whether the friction between families has harmed the transfer of knowledge to younger generations Mrs. Mallard responded with a resounding 'yes' and explained that 'because you can't talk to other people about' culture 'you can't talk to their family' it significantly reduces the flow of knowledge across generations (G2, L.296 – 298):

They just won't sit down and listen and talk about those things, that's why it's... stopping the process of the knowledge going straight down. A lot of people...I mean the ones that reckon Billy knows everything and they carry on, they could sit down and talk to Billy and listen to what Billy's got to say (G2, L.302 – 305).

Helen reiterated Mrs. Mallard's comments concerning the friction between families as a result of Native Title limiting access to knowledge. She describes this as considerable factor driving their increased desire to transfer knowledge particularly knowledge concerning the springs:

It's still got to be passed down because everybody the circle was so big and now there's nothing (G1, L.782). Then our kids can turn around and say well I know this and I did that and...they did [that] for that amount of years (G1, L.789).

Due to the friction within the claim the participants have now formed their own claim group, the Mallard People's claim but still under the guise of being Nanda people. It was at this point I noticed the change in cultural meanings attributed to the springs to

now include Native Title, as Willow explained:

All that river systems important and that's the main reason why our family lodged a claim over that area...for protection of our identity of who we are (W1, L.587 – 591). It's a spiritual connection not a physical connection. We still worship the Beemarra and the Beemarra is still alive because of the amount of times we worship it. We worship it by throwing the sand in there letting it know this is who we are, we your people, we come from there and we just want a drink. We worship by talking about it all the time and mentioning its name and the more we do that the stronger we become connected to it. That [is] the catalyst that is why we lodge [that claim] it's our identity. [That's] what we [are] fighting for more than anything it's our identity of who we are (W1, L.743 – 750).

The emphasis for the participants was again on cultural identity. Willow explained the principal reason they are submitting this new claim is because of their identity, stating 'it's an identity of knowing where we come from and who we are' (W2, L.1179), your identity is comprised of 'your songs, your culture, your language, your stories and your dreaming' (W2, L.1389).

Helen's comments suggest that her ability to endure the trials and tribulations of Native Title comes from the implicit belief in knowing your identity:

That was our big thing fighting for the Native Title...because we always knew that Granddad was Nanda. Because he would always tell us that he was Nanda (G1, L.238 – 249).

Willow acknowledges that to gain Native Title recognition is a long process but that it provides him with the opportunity to 'understand' who he is as an individual:

It's a long, long drawn out process but it's good because you get to understand. I get to understand where I am and who I am and I'm still learning I don't know it all. I've probably got a lot more to learn yet and I probably won't fully understand even by the time I'm in my eighties I'll be still learning. To say that you've learnt everything and know everything well that's just a lie in itself. Because you learn all the time and the minute you stop learning well then you might as well give up (W1, L.457 – 463).

In discussing the springs the participants seek political recognition as distinct people with their own identity different to non-Indigenous people. The springs are now fundamental to expressing their cultural identity which is articulated through their active involvement in the political sphere concerning Native Title.

4.2.2 Squatting and Identity

My observations in talking with the participants was that the long and intense experience of pursuing a Native Title claim against the government demands an enormous amount of energy. The participants are now putting energy into a different form of political activism, squatting. Historically squatting was an activity carried out by non-Indigenous people in order to make claims to parcels of land; it has been supported and encouraged by past governments. Today the participants are undertaking this activity in order to regain ownership rights to traditional land.

For participants squatting presents itself as an alternative to the long and sometimes expensive process of Native Title. Squatting was a direct proxy for agitating political change; you have to 'stir them up' (W2, L.965).

Firstly in order to understand how squatting came to be defined as a source of legitimate political expression I must place it within the context of the participants' historical occupation of the area. From the participant comments it was clear that they have always occupied land in close proximity to a spring Mrs. Mallard stated that 'we use to all camp' (G2, L.713) next to a spring opposite 'where the Post Office [is] now in Kalbarri (G2, L.708). She explained further that they were stopped from camping there 'when all the building started [and] Kalbarri started getting developed' (G2, L.717).

It was at this point that they had moved to a spring site further north of Kalbarri CBD. They were located there up until they were forced to move once again:

Only about six years ago they pushed us from where we were camped at Paradise spring. They said we had to go five hundred meters that way or six hundred meters east. If we had of went that way we would have been on Murchison House land which is lease land (M, L.527 – 530).

Thus for this group it was as Mr. Mallard expressed, a sense of dissatisfaction at being continually forced to relocate due to the expansion of Kalbarri. It was then that they decided to take action to ensure they would continue to occupy their traditional land:

We said no, I'll go see my mate. I have a mate who's a licensed land surveyor and he picked it out on the map where this UCL (unallocated crown land) land was, so he come and surveyed it for me. He signed the document 'If you camp here nobody can shift you if they want to shift

you, you tell them to come and see me' (M, L.530 – 533).

Thus squatting became a political activity to ensure cultural meaning was not disrupted as Mr. Mallard's comments suggest that even though 'Kalbarri is creeping up the river' due to 'progress' they still carry out their 'cultural traditions' and 'squatting on [the] land' enables them to do that (M, L.355).

This was a common themes, for Willow squatting allows him to maintain his identity and spiritual connection to his traditional land:

We [are] squatting on that land at the river...and we can only squat on unallocated crown land... We [are] squatting...because that's our land (W1, L.789 – 790). Some parts of it you hold on by bits of thin thread and you try and bind that thread, you try and bind that thread to make it stronger. I suppose that's why we occupy our land and we've never left our land, we've never left our traditional land. We've always maintained our occupy and we believe...our continued occupation of the land enables us to protect some areas (W1, L.604 – 609).

Greg also expressed that his identity as a traditional owner is the reason why he will continue to occupy the land:

My ancestors been camping here for thousands of years so the same river and I'm an Aboriginal, I'm a Nanda person (Greg, L.477 – 478). If I want to camp there, I'll camp there (Greg, L.514).

The act of squatting could was the method of forcible enacting their call for 'equitable development', as Mr. Mallard explained:

The government may think about letting us have it because that's about one of the last bits of land (M, L.363). Because all the land's been taken up the more progress the less land Aboriginal people have got (M, L.372). So if they are fair dinkum about... making it equal for Aboriginal people closing the gap they should give us that bit of land (M, L.365).

For participants it was an inevitable act to ensure cultural protection. It was easily justified and the issue of past inequalities in relation to land grants given by the government to non-Indigenous people was the argument supporting their squatting actions:

The government, in the early days...gave land to white settlers, they gave it to them. My grandfather tried to get land granted to him in nineteen, nineteen...and the Government

refused him... so it's not fair (M, L.377 – 379). [So] we [are] still trying to get the land (M, L.775).

Likewise Willow commented on the fact that they are still 'trying to get land' (W2, L.777) and that squatting is a continuation of his Grandfather's struggle to own land:

Greg, Dad and all our family are squatting on the land and that's from [my] Dad's time from when he was a little kid and from his father's time from when they were little kids (W2, L.219 – 222).

Greg's comments further supported their squatting actions when describing current existing inequalities:

[They have] just about [got] a highway going up there now (Greg, L.505) *and I can't understand [why] they let these people go on their quad bikes and motorbikes and... spin around [or] whatever they do, lets call it fun. But an Aboriginal person can't camp there and they are causing more destruction to the area then what an Aboriginal person would, so I don't know its different rules* (Greg, L.510 – 513).

The act of squatting was thus directly linked to the protection of and interaction with the springs, it was both deliberate and insightful.

Mr. Mallard and Willow both presented a sound understanding of the politics involved in their decision to become squatters:

The minister for land Brendon Grylls put a notice on our caravans over there. That we had to remove our structures from that area from by the first of December. We never moved them because he's documents were wrong because he [claimed] that Aboriginal people didn't have structures in the early days. But in Grey's history journals...he seen structures down at Hutt river and in our history books it has the mia mias which Aboriginal people built. So his theory that by having the town around there was wrong. So he answered back and now he wants to know what we want to use the land for but we want to use the land for living purposes (M, L.397 – 404).

Willow explained further that the notice placed on their caravans was written under 'section 2702 of the State Government Land Act to remove shelters or they were going to be forcible remove' (W1, L.798). In response to the notice Willow explained that 'under section 213 of the Native Title Act Aboriginal people are not required to [seek] authorisation from any agencies to have structures built there' (W1, L.800 –

802), essentially demolishing the minister's claim.

In this context Mr. Mallard expressed a mixed sense of inevitability and determination at what the future may hold and the extent to which they would be able to protect their cultural rights. Acknowledging that 'it's in the hands of the government whether [they] give it to us' (M, L.531). His comments suggest that he is determined to gain land rights saying 'we will stop there we will go to jail or whatever it takes because we will stop there' (M, L.538). He was not alone, Willow said 'we want to protect what [is] left and we will go to jail over that land, we will go to jail over it' (W1, L.794 – 795). Greg said much the same (Greg, L. 510 – 512) *see quote on page 57*).

The springs have become imbued with political meaning as a result of the participants' ongoing fight to occupy and gain legal ownership over their traditional 'country'. There is a strongly acknowledged need to seek a balance between two differing legal systems to enable the participants' the ability to carryout traditional customs and practices. As a result of ongoing inequalities and discrimination participants have become disenfranchised with government and the process of Native Title, and have sought an alternative course of political action via squatting. Underlying all of these issues is their inherent need to 'care for country' to enable the continuity of their identity as both individuals and as a group.

CHAPTER 5

SPRINGS AS A VEHICLE FOR THE CONTINUITY OF CULTURE

Overall, the continuity of culture was the important issue discussed by all participants. Participants reflected on the critical role the springs play in the continuity of their culture in modern times and also future expectations. Thus participants discussed how they have adapted to changing social circumstances in order to ensure the continuity of their culture.

5.1 Springs as a Focal Point for the Transfer of Knowledge

Participant comments indicate the springs have now become a pivotal point for the transfer of knowledge because of the loss of knowledge in other areas of their culture and the difficulty of accessing cultural sites. According to Mr. Mallard as a youngster a number of families would gather before travelling together to numerous locations that were always close to water. These gatherings provided the opportunity to share oral stories and pass on knowledge attached to these sites:

We use to all meet (G2, L.1401) [at] Ajana [what] use to be an old reserve (G2, L.1395) and then we [would] go to Murchison House...down to Ellendale Pool [or] out to Oakajee River (G2, L.1402), they use to all come and...tell me stories (G2, L.1257).

Mr. Mallard expressed how it has now become almost impossible to access these sites because ‘all that lands taken up’ (M, L.372) and your request for access is generally denied:

[If] you can't get into certain places you go somewhere closer to you...and if that's closed off you go somewhere else. Unless you know the people and you ask them to go in and give you permission to go there that's another way round but a lot won't give you permission to go...any excuse they'll use to keep you off (M, L.820 – 826).

His comments indicate the Murchison river and springs are now the points for knowledge transfer because they can access the land without much difficulty, ‘I take

them over the river...[and] I [have] a camp over [there]' (G2, L.1281):

I take my grandchildren out and...show them what to do and go hunting with them, shooting kangaroos and digging up bush food (G2, L.29 – 32). [My youngest son] Adam [he] knows what to do he knows most the springs (G2, L.2329).

Greg also explained how his son joins them and 'comes over with us' (Greg, L.436) when they are squatting at the river and that is where he learns about culture.

Therefore it was as suggested earlier that the loss of knowledge in other areas of their culture has heightened the importance of the knowledge that remains, particularly the knowledge concerning the springs. Helen said:

They weren't allowed to go to a lot of places... [so] your dance and song...was all taken away (G1, L.267). There's so much that's already gone so much information that's lost (G1, L.1274). The stories that are told from generation to generation got taken (G1, L.1080 – 1083). We've got limited knowledge (G1, L.1783) but it's still there in the basic form for some things (G1, L.1265). [W]e were being robbed all along, things taken (G1, L.937) [and] that's why it's important as a family for us to continue the traditional as much as we can (G1, L.942).

Helen emphasised that 'you're still culturally connected' but 'you're just doing it in a different way' (G1, L.730), continuously adapting to a changing social and political sphere.

I mean we still do the hunting, you still do the fishing and you still go to the water holes, we might go up there for a picnic but what's the difference we're still going there (G1, L.791 – 792).

The motivation to uphold culture was deep, Mr. Mallard was profoundly affected by the events of the stolen generation which resulted in many Indigenous people not only losing cultural knowledge but their identity. He is extremely determined to not allow that to happen to his own grandchildren and is more than ever committed to teaching them about their culture predominantly using the springs to do so:

They [have] got to know their culture [because] a lot of Aboriginal people...the ones who [were] taken away to mission...lost a lot. That's why I don't want to see my grandchildren lose it [and] while I'm still alive... I can show them (M, L.767 – 770).

5.2 Stewardship and Management

5.2.1 From 'care' to 'protection'

Pre-development of Kalbarri the participant's stewardship of the springs was predominantly defined as 'care'. 'Care' focused on carrying out ancestral and spiritual obligations, traditional water customs and maintaining the health of the springs in order to have clean drinking water, all of which are only possible by maintaining a close physical and spiritual connection to the springs.

It was in the post-development era, that participant's stewardship evolved to include 'protection' as a necessary result of changing social and political conditions. 'Protection' was a method of ensuring not only the future physical presence of the springs but also the continuity of culture and identity.

5.2.2 Caring for country and the premise for 'Protection'

From participant's comments it was evident that the cultural reasons behind 'caring' for the springs are multifaceted and dynamic. For example one reason expressed was the importance of water for survival as Willow explained:

Water...is the giver of life for us in this area. People say the giver of life is the sun but it's not really the sun it's the water. That's where life comes from out of the water the sun just helps and assists, the whole thing comes from water it is very sacred to us (W1, L.466 – 469).

For Greg it was his Father who impressed the importance of water upon him:

My Fathêr always said to me 'your waters the most important thing in life beside your family, your wife and your children'. But if you haven't got water you will not survive, no one would survive without water (Greg, L.310).

Thus for Mr. Mallard there was a link to how water must be cared for because it is the 'main source for living' therefore 'you must look after your water' (G2, L.40). Adding 'you [have] to clean [the springs] out all the time, we clean them out all along the Murchison River up from Kalbarri' (M, L.153).

He equally asserts the importance of passing knowledge on to younger generations to ensure the longevity of the springs as was done with him:

Most of the boys use to come out a lot of my cousins and my Dad...and Uncles use to show me a lot of the places (G2, L.20)...the rivers and pools (G2, L.27). All the animals [have] got to have water everything [has] got to have water, so you must look after your water first. That's what the old people tell you, don't upset the water (G2, L.41 – 43).

Similarly Greg suggested the notion that one of the basic pillars of a functioning food web is the availability of water to all. I interpreted this as their culture dictates that all things are interconnected and the survival of one species is dependent on the survival of all therefore driving their responsibility to 'care' for the springs.

This further points to the concept that a mutual beneficial relationship existed between the participants and the springs strengthening their reason to care. Protection was directly linked to 'respect' Mr. Mallard described this as a relationship built on mutual 'respect'. He explained by 'cleaning [the springs] that is where...the old people reckon you get your respect from the land by looking after it' (G2, L.386), 'if you look after the land, the land will look after you' (M, L.292).

Helen asserted that 'respect' for the land is something that is instilled in you from a very young age, as part of the generational transfer of knowledge:

It's inbred into you, you're taught that's what you're doing on the land, this is how you treat the land so you treat it with respect and you'll get that back (G1, L.1389 – 1390). You just respect it you're taught to respect even if you don't know (G1, L.1400) [it's] just the fact of looking after the land that you're on (G1, L.1409).

Likewise Nanna Iris stated 'you did what you were told' (G2, L.1494). Here she was saying her culture dictated an ancestral obligation as impetus for 'care', this was echoed in Mr. Mallard's comments, where 'respect' and 'care' were also integral values passed from one generation to the next:

The old people tell you clean that spring out it's dirty. They take you there clean that spring out you boys, it's dirty. [So you] get in there clean it out, bucket it out and cut the bushes (G2, L.1490 – 1492). It is part of your culture, they tell you, you have got to keep this clean all the time and every time you come here, you clean this spring out (G2, L.1512 – 1513).

Greg noted that ancestral obligation stems from the fact that his ancestors relied on those springs, for them caring for and maintaining was for future generations. Thus 'care' was a way to maintain connection to ancestors:

I respect every site I walk on to because people before me have done that. Older people then me a lot older have walked on that same place and they've camped on that same place, you know (Greg, L.220 – 223). So the springs are very important to me, [because] ...that's where my ancestors walked (Greg, L.442 – 444).

Mr. Mallard connection to his ancestor is strengthened by 'looking after':

We just go do it out of the goodness of our hearts because that's our culture where our old people get water from. You get a feeling to the land when you go there it's hard to understand (M, L.492 – 495) it's just something to look after (M, L.499).

He impressed this 'feeling to the land' on to his grandchildren, employing a tactile approach using a special tree located within close proximity to a spring:

You see there's a big tree over there where we used to camp all the time when I was a kid. I take my grandsons and say come and put your arms around this tree and he can't because its to big but they come and hug the tree. I tell them you get a good feeling there hugging that tree I say that to him all the time when I go there, huge big tree (M, L.977 – 980).

Spiritual obligation to care for the springs was expressed by Helen as carrying out customary activities:

When we go to waterholes and rivers we always throw a handful of sand in (G1, L. 1414). If I'm going to touch water anywhere I do that because you're coming as a friend, you're coming to look after the country (G1, L.1420 – 1422). It lets the spirits know that you're not meaning any harm, you're just coming and going (G1, L.1469).

Greg expressed a personal responsibility to preserve and maintain culture by handing knowledge he has been given to his son and measured his success by the fact his son knows the locations of all springs:

My Grandfather handed it down to my Father, he handed it down to me [and] I've handed it down to my son...to keep it going (Greg, L.537). See my son...he knows all [the] water points...he knows just as much as me (Greg, L.247).

In passing their knowledge on there is the expectation that younger generations will 'care' for the springs and carry their culture with them into the future, as Greg explained:

I'd expect him to...look after the water soaks and the sites (Greg, L.427) [and that] he carries it on and...he's children's children....do what I've done (Greg, L.441).

Likewise Mr. Mallard expects that his grandchildren will 'care' for the springs and ensure the continuity of culture:

They can keep carrying it on I stress that to them. I told them you kids...when Pops dead and gone you kids can look after the springs (M, L.1062 – 1064).

Here Willow expressed the reason his father 'cares' for the springs stems from a desire for intergenerational equity and a need to ensure the continuity of their spiritual connection:

When his great, great grannies come back and say well why didn't my grandfather protect this country because we don't own this, it's owned by those yet to come to and they got a right to it too and that's what we looking at (W1, L.870 – 873). We want to make sure that what's today is better for tomorrow and they still have that connection and that thread gets stronger (W1, L.879).

Thus Willow explained clearly that the continued existence of the springs is the care his family gives. Noting that 'care' is not simply 'physical' rather it is 'spiritual' based on your identity as a traditional owner:

Those springs are still there because of the protection our family give as Aboriginal people... We worship it by throwing sand in there letting it know this is who we are, we your people, we come from here [and] we just want a drink. We worship by talking about it and mentioning its name all the time and the more we do the stronger we become connected to it. (W1, L.742 – 748).

He noted that there is also a negative consequence if they do not care for the springs:

If we don't go there and we don't clean the springs and do the ceremonies that take place, one we can become ill or we can lose that source of water. It can get taken away from us, it can dry up, it can block up and it can overgrow (W1, L.737 – 740).

In this light and linked to the general life giving role of the springs and its interconnectedness Mrs. Mallard drew further attention to the importance of 'care' for others who might want to utilise the springs by asserting 'not only do you do it for yourself but you do it for everybody else' (G2, L.423). Additionally Mr. Mallard states that 'you never know who's going to come along and want a drink of water...[so] why not spend a couple of hours cleaning the spring out' (G2, L.419 – 421). Reiterating the need 'to share things with other Aboriginal people [no] matter [where] they come from, they are still Aboriginal people' (G2, L.431). As Mrs. Mallard added 'we're still doing it for them' (G2, L.434).

With this in place, Willow explained that the act of 'care' is physically carried out by '[burning] off [at] certain times of the year and [cleaning] around the area' (W1, L.623). Mr. Mallard described how his method is the same method his Father used, 'he used to burn it out all the time... [and] cut all the roots [away]' (M, L.346) he further described the cleaning process:

We burn the soaks and springs [because] weeds come up [so]it makes the water clear to run through the ground. Because the weeds and the roots generally block the flow (M, L.47 – 49).

The amount of water present in the spring is the barometer by which Mr. Mallard measures the need for cleaning but he advocates cleaning the springs if you are to drink from them, as he explained:

You go and have a look at them and when you see them you know how much water use to be there. Say you went there today and there's a lot of water and you went back and you see less water so cut the rushes and burn them if they need burning (G2, L.1460 – 1462). You always clean them out before you get a drink of water because the water's dirty. Once the water is flowing its right because the water gets sieved through the sand, its flowing, so the water isn't stagnant (G2, L.1051 – 1055).

Mr. Mallard modestly suggests that 'it's more or less common knowledge... [because] you can see when something needs fixing' (G2, L.1485). Helen further states that there is a component of 'not realising that is what you're doing', that 'care' becomes a subconscious act deeply entrenched in culture and almost a by-product of your everyday activities:

[It's] all part of caring for the land but not realising that's what you're doing because if there's something wrong then they would do something to fix it. They always care for the land (G1, L.1320) and sometimes there doesn't have to be a reason...it's just there (G1, L.1389).

'Care' is complex and dynamic, composed of many differing but interconnected motivations involving life, respect, generation and spirit. Participant comments suggest the ultimate objective is to ensure the continuity of their culture and their identity, as Willow asserts 'it's an identity of knowing where we come from, who we are and what we do' (W1, L.1179). In this sense however 'care' has evolved to mean 'protect'.

5.2.3 The Practice of 'Protection'

While the springs were seen as for all, one method participants had implemented to deal with the continuous desecration of springs sites and ensure their longevity is to simply keep the springs 'secret' or 'not show' people where they are located essentially protecting the springs from contact with wider society.

In response to asking whether it has always been the case that they have kept the springs as 'secretive' as possible Mr. Mallard explained that 'it wasn't always like that' (G2, L.2174) and in the past he had gladly taken 'anybody who wanted to see them' (G2, L.2178). He also described the crucial role the springs played in the early days of land surveying by non-Indigenous people. Here he expressed a sense of betrayal by society:

In the early days with the surveyors they had to rely on the Aboriginal people to show them where those spring were so they could survive off the water too (G2, L.2270 – 2271). The old people showed them where all the water points were and now it's gone back on us because they are all throwing rubbish in them (G2, L.2276 – 2277).

Three participants highlighted the vandalism of important rock art. Their comments suggest that this fed the growing urge to keep the location of springs a secret from wider society, as Mr. Mallard explained:

[There are] paintings down at a place called Willi Gulli out from Northampton some people went there... and spray painted over it, they vandalised it. So it makes you wonder whether to show people or not and it's disheartening to see that thing happen (M, L.144 – 147).

Willow strongly indicates the feeling that ‘the same thing would most likely occur...if we were to show the majority of paintings...so we don’t show anyone’ (W1, L.533). In line with the discussion of ‘protection’ Helen contemplated whether the incident could have been avoided had there been adequate management in place:

The rock art ...at Bowes (Willi Gulli) (G1, L.1566) has been graffitied now if there had been something in place may be that wouldn't of happened (G1, L.1578).

It was the continual desecration of springs close to Kalbarri CBD that proved the tipping point for participants. It was at that point ‘not telling’ or ‘showing’ others became a necessary method of ensuring spring longevity. As Willow explained it only extends knowledge to immediate family members to ensure springs locations are kept a ‘secret’, therefore limiting wider society’s contact with the springs in turn reducing the possibility of spring desecration and ensuring the continuity of their culture:

The protection for those springs is we keep it as secretive as possible within our own family group. That way we try and limit the amount of people that go there and make contact with it (W1, L.623 – 625).

Greg vividly described the tipping point and what ‘people’ have done to cause them to implement this method of protection:

I won’t show anyone those springs because people go there and damage them (Greg, L.36). There's several here in Kalbarri, Gidamarra the one down here next to the post office and there's the one out the back here called Grey's Spring. They've all been filled in and people urinate in [them] I've seen them do it [and] it's full of broken glass and bottles (Greg, L.147 – 149). That's why everything I know what my old man's told me and showed me I'm not prepared to show anyone else (Greg, L.36 – 38) except... immediate family (Greg, L.42) my son [and] my grandchildren (Greg, L.276).

Likewise Mr. Mallard declared his reason for keeping the springs a ‘secret’ (G2, L.2286) was because of ‘all the disruption and rubbish people throw in the springs....[such as] tins, beer cans, bottles and even kimbies (nappies)’ (G2, L.2141 – 2143).

The problem of protection from desecration is captured by Mr. Mallard. He acknowledges that his identity or ‘aboriginality...is slowly being eaten away’ and there is a need to ‘protect some of it’ (G2, L.223):

By hurting them springs they're hurting us as humans (G2, L.2311), [by] damaging them they're damaging our beliefs. They wouldn't like us to knock the Cathedral down (G2, L.2316) [it's] the same thing really but different meaning (G2, L.2321).

Helen suggests if they do not protect what is now left they will be threatened with the loss of their identity as Aboriginal people:

A lot of it wasn't protected... [and] what is still there needs to be protected. No matter [if you have] just a drop of Aboriginal blood in you, well you're Aboriginal but... even that will get lost unless things are looked after (G1, L.1604 – 1608).

There was a pragmatic stance here. Helen's comment dictate that a loss of trust in the wider community has led to 'not telling' and becoming 'secretive' as 'some things that I've been told I won't tell anybody because you don't trust anybody' (G1, L.1272 – 1273). By limiting the number of people who come in contact with the springs you reduce the possibility of spring's desecration, as Greg suggests:

You might take eight people out there [and] six of them might be good people, might be real genuine people but them other two people might go back the next day and who knows what they'll do (G, L.268 – 279). If you showed me something and I didn't like it and I wanted to damage it I [know] where to go (Greg, L.164).

In reflecting on this method of protection Mr. Mallard evidenced its effectiveness by comparing the health of the springs closer to town against those they have kept secret, attributing the continued existence of springs in their 'natural' environment to the limited number of people who are aware of the springs' locations (M, L.476 – 477)

5.2.4 Values and attitudes of society and government

Protecting the springs was a way of protecting cultural identity. Greg expressed the difficulty he has had dealing with the lack of 'respect' society has shown towards Indigenous heritage:

I've been brought up to respect everyone...I respect you [and] I respect all the people here in Kalbarri but a lot of people don't respect Aboriginal heritage... which is hard for me to take sometimes (Greg, L.534 – 537).

A number of participants discussed why they believe the springs have been targeted suggesting it is based on the fundamental premise that both government and society

do not value the springs and their place for Indigenous people either intrinsically or culturally. Greg described the degradation of the springs as an act of racism and something that is inevitable (Greg, L.170-173).

Helen reflected on the affect racism has had on many Indigenous people describing it as the driving force that repels many Indigenous people from Kalbarri and in turn the springs:

Very racist place Kalbarri (G1, L.644)...I know people that have gone there and stayed [and] the locals make it hard...they make Aboriginal people [feel] uncomfortable...A lot of people [do] not have the confidence to do it (G1, L.678 – 680) and [when] they...they experience the racism and think 'shit I'm not going back there again' (G1, L.687 – 689).

Helen attributes the disrespect exhibited by society to a lack of understanding the basic concept of respect in that 'you're taught to respect even if you don't know and today's society doesn't understand that' (G1, L.1400). She states that even if society does not understand the importance of the springs to identity and the continuity of their culture respect must still be shown. Willow similarly ascribed the desecration of the springs to 'people who haven't got an understanding of culture' (G2, L.542).

From Mrs. Mallard comments what this reflects is an imbalance in terms of 'respect' and that people 'don't care' and 'they think [it's just] another blackfella thing' (G2, L.604):

We'd never go to a whiteman's cemetery and do all those things, never that's taboo but they don't care (G2, L.616).

Mr. Mallard's comments suggest that presently government and society value the land on which the springs are located for development and financial gain over the cultural significance of the springs (G2, L.1012).

Mr. and Mrs. Mallard further discussed where they believe these values and attitudes towards Indigenous culture and the springs stem from, from their comments three themes emerged 'education', 'colonialism' and 'parents' (G2, L.634). Mrs. Mallard highlighted the generational transfer of these values and attitudes have allowed them to survive and flourish in modern society:

You get people... that are really racist people... and they just hand that down from one kid to

another [they] just don't care about it (G2, L.645).

5.2.5 Spring management

Thus the drive to protect culture meant the need to be involved in the political and economical spheres, and to argue for a different form of management owned by the family. Willow intensely conveyed the current state of management involving the springs and the lack of 'legal authority' they have to protect them. He further explained that the lack of 'legal authority' does not stop them from protecting the springs because they derive their authority from their culture which dictates they 'care' in a manner which will ensure the continuity of their culture (W1, L.688 – 694) *see quote on page 50).*

His comments indicating that an intricate and extensive understanding of the springs and surrounding area is required to enable the method to succeed:

It should be given to those that occupy the area whether it's our family or another family of Nanda people. [It] shouldn't be given to Nanda people who live five hundred, six hundred kilometers away.... it should be given to those people who occupy and have not left (W1, L. 761 – 763).

If there is the determination of Native Title then Willow advocates the return of ownership, control and management of the springs and surrounding area to the Nanda people who as stated previously are the traditional owners of the area:

Give them full ownership of the river, the springs [and] the land around that area (W1, L. 774) the whole area should be closed off to all people except the Nanda people. [It] should be closed off and there should be a... interpretation centre set there so that it's controlled that people go there and have a look and the ecological system, the water system, our spiritual connection, our religion is all maintained and protected. We [are] not denying access to it...we just want it controlled and managed in a appropriate way which preserves our cultural significance to the area... that's what I would like (W1, L.753 – 761).

It was evident from participant comments that they believe the values and attitudes discussed above are reflected in the current management of the springs and surrounding area. When asked whether local government 'looks after' or 'manages' the springs Mr. Mallard responded very promptly saying they 'do nothing' (G2, L.1142) in terms of 'management'. For example he explained that he has been

‘complaining about’ the ‘septic’ leaching into the springs ‘for years and they [have done] nothing about it’ (G2, L.596). He attributes the lack of management to the fact that ‘they don’t want to look after Aboriginal people, they don’t want Aboriginal people there’ (G2, L.1146).

Mr. Mallard described the Shire of Northampton’s focus on development as supporting the notion that government values the land for development rather than ensuring the continuity of Indigenous culture:

The Shire wants to develop around the spring and it's very delicate because they are messing up our watercourse (G2, L.211).

The participants acknowledged this as an important broader issue, Willow described how ‘the whole river systems is full of...sacred sites...and it’s not protected’ (W1, L.781), he feels that local government does not want to protect the springs and in turn implied that they do not wish to protect the continuity of their culture and identity:

All that river systems important...because the protection of our identity of who we are...goes to our cultural resources of those caves, the ocean, the rivers, the pools, the food, the animals [and] no one wants to protect them that's the feeling we get (W1, L.587 – 590).

According to Helen both society and government ‘want [their] information’ but ‘do not want any actual involvement from Aboriginal people’ (G1, L.664). Greg said pointedly:

I haven't been consulted about anyone going out checking sites or cleaning springs or fencing springs (Greg, L.341 – 342).

He explained the difficulty he has experienced negotiating with the Shire of Northampton over the management of the springs and how he does not agree with their current management agenda:

It is very hard to negotiate with [the] Northampton Shire...[to] put a proposal up to them. I know for a fact they want to fence them all off [but] I don't agree with them (Greg, L.398).

Greg’s disapproval of current management is based on the logical premise, that it does not deter but entice people to the springs essentially perpetuating current values by providing those who wish to desecrate springs with the opportunity to do so:

I disapprove of... fencing them and putting signs up because if you see... a piece of glass shining on a hill you [are] going to go and have a look at it (Greg, L.343 – 344). I've said to Dad and Willow that you put a fence around it naturally... if it's shorter to go to that spring and chuck their load of rubbish out, which is two kilometers out of town and the rubbish tip is eight kilometers out of town, you go and chuck it in the spring (Greg, L.373 – 376).

Current management as Greg notes only serves to broadcast the location of springs to wider society thus contradicting their preferred method of protection of keeping the location of springs a 'secret' (Greg, L.151 – 156).

This sense of dissatisfaction at the inadequate level of management was expressed by Mr. Mallard on a number of occasions (see G2, L.220; M, L.323; M, L.957) *see quotes on page 44, 39*). For Helen the dissatisfaction extends to the failure of formal structures to ensure springs are not desecrated. The much preferred path was that those who are responsible for carrying out management such as rangers receive local Indigenous cultural training. Helen described the need for rangers and environmental managers to be educated by local traditional Indigenous people, about their culture and the methods of identifying and caring for country:

Where are these rangers that are supposed to go and clean it up or where are they when they're supposed to be looking after it (G1, L.1387). I know people that have been rangers and they just jump in their car and it's just a drive in the country but [they] may not know something in particular that is there like a grinding stone. They could just be somewhere and they wouldn't recognise it so they're really not trained and it would be their fault if the ran over it [because] they didn't know what it was (G1, L.1478 – 1482).

Helen had a preference towards the recruitment of local traditional Indigenous people as rangers but ultimately acknowledges that it is secondary to their primary objective, protecting and maintaining their culture. She dictates they must be willing to negotiate who carries out management and monitoring but stipulates that local traditional owners are the only people who can provide and pass that knowledge on:

[It should] ... be Aboriginal people...the people of the area...to have the first option of being a ranger and being able to have that training. But if there's not then somebody's got to do it but that person should still be trained (G1, L.1520 – 1523) and it should be done with people who do know the area (G1, L.1528), somebody like...Uncle Billy and them [because] they do the

traditional things and they know what's around so they would have the knowledge (G1, L.1534 – 1537).

In line with Helen's comments Mr. Mallard (M, L.957) *see quote on page 39*) recommended the need for government to employ a local person to patrol the springs particularly at the peak of the tourism season, and Greg described how he would like to see 'all the water points being monitored' as a way of staying on top of any illegal activities that might be occurring and ensure intergenerational equity (Greg, L.239 – 243).

In this context Willow suggested 'joint management' between the traditional owners and formal agencies to tackle the issue of spring desecration. In presenting joint management he recognised the practical benefits that may arise from developing a partnership with formal agencies such as: increased availability of resources and the ability to exchange knowledge which could increase understanding of culture and environment. He further argues that those who are involved should still 'live in the area' (W2, L.209 – 212).

Joint management was also important to Greg to elevating the current social climate that exists in Kalbarri although he believes it will not be achievable in his time. He hopes future generations will 'work together' (Greg, L.415 – 418). Through this there was the possibility of increasing community cohesion and eliminating the social and economical division between Indigenous and non-Indigenous people.

5.2.6 Difference between 'stewardship' and 'management'

Distinct differences between Indigenous stewardship and non-Indigenous management were highlighted by Helen's suggestions. Participants described the differences in terms of time spent on country, job versus cultural obligation, care versus development and level of ecosystem understanding. Greg connected this to a spiritual link. An Indigenous person has a deeper spiritual connection therefore would spend more time at a spring because 'caring' for the spring is viewed as a cultural obligation. Whereas a non-Indigenous person lacks the spiritual connection and would complete the required task and move on without applying full care (Greg, L.232 – 235).

Mr. Mallard without hesitation confidently stated, 'we look after them better' (G2, L.2187). Comparing 'care' and 'management' he attached management connotations

to the way wider society and development negatively affect spring health.

Helen spoke extensively of the prominent temporal difference that exists between Indigenous and non-Indigenous peoples understanding of ecosystems:

If they'd listened to Aboriginal people there wouldn't have been these big raging bushfires and they knew because of those little fires...they knew because they cared for the land. [When there is] big wild fires...there's no control (G1, L.1221)...flora and fauna are destroyed (G1, L.1260)... but if they had taken control and listened to the old people it would have been alright. Because...they weren't just some crazy blackfellas' going out there lighting a fire (G1, L.1225). It is always about caring for the land and there will be stories that will go with it (G1, L.1240).

CHAPTER 6

SYNTHESIS

This chapter provides a synthesis of the work presented in the previous three chapters. Significant themes are highlighted and discussion relates relevant findings to the relationship between evolving cultural meaning and their effects on land and water practices, as per the aim of this thesis. I also examine the relevance of this study to natural resource management. I conclude the chapter with a discussion of some of the limitations of the study and some suggestions for future research. I provide some reflexive comments concerning the research process and results.

6.1 The dynamic and complex nature of cultural meaning and relationship with ‘country’

I believe the findings of this study support the proposition that cultural meaning invested in the springs evolves and changes, in turn effecting interactions with land and water practices. A plurality and complexity of meanings emerged strongly from what the participants said and the way they spoke, evident in the transcripts. Participants involved in this study are the traditional owners of Nanda ‘country’, the area where the study was conducted. They have maintained a strong spiritual and physical connection to the springs which spans generations despite continued political and social discrimination. The participants continued to occupy their lands and carryout traditional customs and rituals to ensure the longevity of the springs. The springs were meaningful for participants in a number of ways, for example, water was identified as the symbol of life. The importance of cultural meanings such as these were indicative of the participant relationship with the springs and was titled ‘Caring for country and the premise for ‘Protection’’ (see section 5.2.2). This theme detailed the foundational meanings that participants derived from their culture and instilled in the springs and in a sense these meanings have not changed.

The meanings attributed to the springs resonated from culture infusing land with meaning and significance, transforming it into what is known as ‘country’ as suggested by Dodson (1996). ‘Country’ in this study represents the interconnected

and multi-dimensional world of all animate and inanimate beings; people, animals, plants, water, soil and Dreaming (see Holst, 1997; Rose, 1996). 'Country' is synonymous with life; life is meaningful and represents the underlying cultural meaning attached to the springs. In many ways 'life' encompasses all of the other meanings invested in water, as religious historian Mireca Eliade stated, "water symbolizes the whole of potentiality; it is the fons et origo, the source of all possible existence" (1974, p.188). This has also been exemplified by Jessica Weir through her research with Indigenous peoples of the Murray-Darling Basin, stating that "many of the traditional owners attribute the capacity of the river to sustain life" (2008, p. 157).

The culturally based recognition of the interconnectedness and interdependence of all animate and inanimate beings was a fundamental meaning to emerge from the study. Participants explicitly recognised as did Rose (1996) through her research with Indigenous peoples, that one's own health and well-being is inextricably linked to the health and well-being of the land, exemplified by the statement "if you look after the land, the land will look after you" (Mr. Mallard, L.292). The human is perceived as being just one part of the web of life, not central to it, radically undermining the nature/culture dualism that has held steadfast in the realm of western science for many decades (see Berkes, 1999; Mazzocchi, 2008; Rose, 1996, 2008; Weir, 2008). By viewing the world as interconnected and interdependent the separation of culture and nature is addressed because interconnectedness and interdependence places people and their cultures in relationships with 'country' (Weir, 2008). While based on Dreaming stories that dictate the interconnectedness of animate and inanimate beings, participants expressed a practical understanding of the fact that all entities including 'country', are enmeshed in connectivities resulting in mutually beneficial relationships (see Rose, 2003). The existence of mutually beneficial or symbiotic relationships between Indigenous people and other animate and inanimate beings has been widely acknowledged and publicised in various fields including anthropology, archaeology, natural resource management (NRM), and sociology (see Barker, 2006; Berkes, 1999; Berkes & Folke, 1998; Cavalcanti, 2002; Kalland, 2000; Langton, 1998; Strang, 2005).

The findings of this study support both Cardinal's (2001) and Langton's (2006) proposition that Indigenous peoples' relationship with land are composed of 'spiritual', 'emotional', 'social' and 'physical' components. The comment of one

participant in particular clearly demonstrated this intimate spiritual and emotional connection as a 'feeling to the land' (Mr. Mallard, L.492), as a number of other participants considered the springs as an important setting for maintaining connection to ancestors and spirits, with the power of those entities (see Langton, 2006) being expressed in terms of the water sources being provided to them. The spirits, the 'old people' (Mr. Mallard G2, L.41), and the ancestors (Greg, L.312), reside in the springs in life and continue to reside in them in death, they represent a sacred component of life and their engagement continues to encourage and assist the use and maintenance of productive springs (see Rose, 1996). Numerous participant comments highlighted the importance of understanding that no one being can sustain a rich and enduring life without depending on others for 'spiritual', 'emotional', 'social' and 'physical' sustenance (see Mazzocchi, 2008).

The results of the analysis clearly demonstrates the deep and intimate spiritual connection between the participants and their environments. These findings also support the work of Johnson (1992) who found that beneficial relationships are based on the concepts of reciprocity and respect towards all living and non-living entities. Participants expressed the importance of these concepts to promoting and maintaining a mutually beneficial relationship, describing 'respect' as something you are 'taught' (Helen G1, L.1389) and something that you receive from the land in return for the 'care' you provide (Mr. Mallard G2, L.386). It is here the 'physical' aspect of the relationship is expressed, through a set of direct responsibilities and obligations for stewardship (Cardinal, 2001). The results highlight four specific and closely interwoven obligations; 'spiritual', 'ancestral', 'social' and 'generational'.

Spiritual obligations dictate how one must carry out customary traditions to ensure spirits residing in the water are explicitly acknowledged and that you clearly identify yourself. This was most clearly exemplified by the participant's custom of throwing a hand full of sand into the water before utilizing it. It is a method used to identify to the spirits 'who you are', 'where you come from' and the 'intention of your visit' (Willow W1, L.742; Helen G1, L.1414). In layman's terms it is comparable to knocking on your neighbour's door and asking for a cup sugar, you definitely would not barge in and take what you want without first asking permission. The ancestral obligation mandates that one must 'care' for the springs in the same manner as others have done before them (Greg, L.220). Analysis of the transcripts suggest not only

does this obligation aim to exhibit a deep level of respect and gratitude towards the actions of ancestors, but that is also influences social and generational obligations. Participants expressed that they feel personally responsible and accountable to other Indigenous people, especially the younger generations of their immediate family to ensure that the water from the springs is clean and drinkable (Willow W1, L.870; Mrs. Mallard G2, L.423). Analysis also suggests that fear of negative repercussions further influenced the fulfillment of these obligations. One participant in particular expressly described how they could become 'ill' or 'lose that source of water' if they did not carry out the appropriate traditional customs (Willow W1, L.742). Hawley, Sherry and Johnson similarly concluded that individuals who violate a set protocols that dictate a person's relationship with their environment 'may suffer by the loss of beneficence from nature' (2004, p. 44). This is regarded as a significantly greater punishment than could be administered by people themselves.

These findings support evidence presented in the literature that cultural meaning instilled in place denotes the interconnectedness and interdependence of all things. It follows that a complex, dynamic and holistic mutually beneficial relationship exists between Indigenous people and place, and that multiple interwoven responsibilities direct human behaviour and actions towards its use and maintenance (Rose, 1996; Berkes et al., 2000).

6.1.1 Development and change in meanings invested in the springs

Per Gustafson (2001) through his research concerning the theoretical conceptualization of meaning, posited that meanings invested in 'place' are geographically located and are developed in a social context and through a person's interaction with their social, economic, political and cultural surroundings. Gustafson further stresses that because of these interactions with the surrounding world, meanings are not static. On the contrary, meanings are continually 'developed' and 'redeveloped' as a result of a person's interaction with their surroundings. Over time, places may acquire new meanings as people experience external events and/or consciously decide to make changes. The temporal dimension that Gustafson highlights explicitly denotes the possibility of change, it also highlights that the formation and attribution of meaning to place is an ongoing process. The findings of

this study support the notion that meanings evolve and change as a result of people's interactions with their surrounding environments.

'Economic Development' (section 3.1.1) was related to the theme of 'Expressing a need for Employment and Cultural Training' (section 3.1.2). These themes signify the development and attachment of new meanings as a result of interactions and involvement in the social and economic realm. A wide range of research demonstrates that Indigenous Australians experience the greatest level of economic disadvantage of any social group in Australia (Howard, Fuller & Cummings, 2004). Indigenous Australians also participate to a far lesser extent in the mainstream economy including education and training opportunities (Howard et al., 2004). For Indigenous Australians what this dictates is far less opportunities for employment and economic security than what is generally provided to the rest of the Australian population (Fuller & Cummings, 2003). In the history of Australia, Indigenous peoples have suffered through the stages of appropriation involving dispossession, dispersal and destruction of their economic underpinnings (Miller, 1985). Historically government policies excluded and denied Indigenous people the right to benefit from economic activities (Howard et al., 2004). In many parts of Australia this has resulted in Indigenous peoples becoming increasingly dependent on government welfare services and programs in order to survive in today's modern society (Fuller & Cummings, 2003).

Marcia Langton (1998) demonstrated through collaborative research in the Indigenous domain, that Indigenous peoples are now utilising their cultural values that govern interactions and use of natural resources, as tools for developing economic initiatives as ways of combating new global pressures. Results of the analysis support this finding and show that economic and employment meanings have been developed and attached to the springs, influenced by past historical injustice such as government suppression of economic development (Helen G1, L.901; Willow W2, L.742), and the implicit recognition of the need to become economically self-sufficient (Mr. Mallard, L.989). Participant comments highlight that they now view the springs as a potential source of providing a sustainable long term income. They acknowledged that their cultural knowledge pertaining to the springs and the surrounding area is ideal for tourism (Mr. Mallard, L.1025) and cultural education (Willow W1, L.753) ventures as well as employment in the natural resource management sector (Helen G1, L.1520).

More importantly, the participants not only recognise the potential economic benefits that can be gained from such initiatives, but that their involvement may contribute to the maintenance and conservation of ecological and cultural systems. Langton (1998) similarly concluded that activities such as tourism, cultural education and natural resource management aid Indigenous peoples in escaping welfare dependency and securing an economic basis for the future. Langton further claims that such activities allow for suitable integration of traditional cultural customs without creating conflicts over potential breaches of Indigenous law. Howard et al. (2004) similarly concluded that integration of social and cultural aims and objectives is the most important and influencing factor in determining the viability and long term sustainability of Indigenous economic initiatives.

6.1.2 Continuity of Culture and Identity

Analysis of the transcripts revealed a number of interconnected issues surrounding the issue of 'continuity of culture and identity'. This issue was most implicitly expressed through the themes of 'A need for Equitable Development, Identity and Policy' (section 4.1.2), 'Distrust of Government, loss of power and Identity' (section 4.1.3), 'Native title, Friction and Identity' (section 4.2.1), 'Squatting and Identity' (section 4.2.2) and 'Springs as a focal point for the Transfer of Knowledge' (section 5.1). These subthemes signify the importance participants placed on maintaining physical occupation of land within close proximity to the springs, through interaction and involvement in their political environment, to ensure the continuity of culture, identity and to sustain familial solidarity. Fred Myers (2000) similarly concluded in his research with the Pintupi peoples of the Australian Western Desert, that there exists a intimate link between land and identity. For example, Myers asserts that "one's identification with a named place is...at once a defining of who one is and at the same time a statement of shared identity with others" (2000, p. 88). The findings of this study also support those of Proshansky, Fabian and Kaminoff (1983), that identity develops in response to one's direct involvement and interaction with their environment. Twigger-Ross and Uzzell (1996) similarly found that place is not merely a setting within which to encounter experiences but that it actively influences the construction of identity. Participants expressed that 'who we are' is underpinned by 'where we come from' (Willow, L. 1179) and as noted by Dixon and Durrheim (2000) 'who we are' is intimately related to 'where we are'.

Indigenous peoples are born with an inherited right to land and water, and share these rights with other members of the clan together forming cultural rights to 'country' (Langton, 2006). These rights were violently stripped from Indigenous peoples through the indoctrination of 'terra nullius', land belonging to no one, a concept employed by British settlers to justify their settlement of Australia. The drive to reconcile such horrific injustices has primarily been dealt with in the legal and political spheres. In a revolutionary decision in 1992, the Australian High Court recognised for the first time the existence of 'Native Title'. The inception of Native Title, has motivated the participants to assert their traditional identities by submitting a claim over their traditional lands. Native Title recognises collectively held traditional laws and customs under Australian common law (Weir & Ross, 2007).

Participants drew attention to the double-edge ambiguous nature of Native Title. On the one hand, participants expressed that Native Title allows them the opportunity to have their identity and traditional rights to 'country' legally recognised (Willow W1, L.578; Helen T1, L.238), as well as the opportunity to exercise traditional authority. One participant's comment in particular emphasised that knowledge and traditional resources are central to the maintenance of their identity and that access to, involvement in and control over the decision making, concerning the management and use of those resources is a central concern (Willow W1, L.587). On the other hand, participants expressed that Native Title is incredibly problematic and is at times at odds with the continuance of their laws and customs (Weir & Ross, 2007). Thus, Native Title has the power to considerably impair their ability to exercise traditional authority and carry out traditional responsibilities of 'care' (Mr. Mallard, L.775). Weir and Ross (2007) consider this to be one aspect of Native Title that demonstrates how increasingly entangled traditional authority has become with Australian common law.

In the more densely settled parts of Australia the extinguishing effect of certain types of land tenure has limited the potential of Native Title to recognise the laws and customs of traditional owners (Weir & Ross, 2007). Analysis of the transcripts supports this statement, for example participants noted that carrying out traditional customs and activities are difficult to do when they cannot access 'country' (Mr. Mallard, L.874). Participants pointed to the restricted access they have to 'country' within local government boundaries in which springs are located as demonstrating

this problem. Now, without access to 'country' the Elders are unable to pass their knowledge on to the younger generations and this is viewed as a major threat to the continuity of culture and identity. This is experienced by the participants as a present-day loss of cultural heritage. However, as Foucault pointed out, 'where there is power, there is resistance (1990, p. 94). This signifies that domination is a process, where the framework evolves through conflict and resistance, and where the cultural continuity becomes evident through the reconstruction of meaning (Nygren, 1998).

The participants therefore seek to protect what knowledge remains from being further lost or destroyed. Rather than deny the loss that has occurred or accepting the current circumstances in relation to access to 'country', participants acknowledge what has happened and are asserting their traditional authority irrespective of Native Title outcomes (see Weir & Ross, 2007). Analysis of the transcripts reveals that the long and arduous process of Native Title and increasing distrust of local government has had a particular effect on the mobilization of participants to take further action. These findings support evidence in the literature that aspirations to safeguard the continuity of identity and culture is a motivator of action (see Breakwell, 1986; Sutton, 2001). The process of squatting on land close to the springs is a political response outside of the realm of Native Title and is part of the process of reasserting power and control over their right to occupy traditional lands.

Participants presented squatting as the only possible course of action that could secure them legal rights to occupy land within their traditional boundaries. Squatting is also seen as a method which would allow not only the maintenance and preservation of their culture and identity but also enable them to carry out traditional responsibilities of 'care'. The literature regarding alternative political action outside of Native Title tends to focus on the formation of organisations by traditional owners in order to better engage with government agencies concerning the management and use of natural resources (see Langton, Mazel, Palmer, Shain & Tehan, 2006; Weir & Ross, 2007). To this end, the springs have become a vehicle for the continuity of culture, identity and the transfer of knowledge as a result of threats against the participants' abilities to continue occupying their traditional lands, carry out traditional custom and 'care for country'. These findings support work by Gustafson (2001) who posited that participants play an active role in the process of giving places meaning and the

interplay of continuity and change undoubtedly shows that meanings of place are not static.

6.1.3 Traditional Ecological Knowledge and Natural Resource Management

Berkes (1993) suggests that management of natural resources is based on the meanings people attribute to places. The findings of this study supports this notion but extend it by stating that: Indigenous peoples also adapt and evolve stewardship practices according to changes in meaning. Berkes et al. explained that Indigenous people adapt their stewardship practices, “wherein feedbacks of resources and ecosystem change indicate the direction in which management should move” (2000, p. 1259). The meanings instilled in the springs and the unique mutually beneficial relationship Indigenous peoples have with their environment arises from their culture and their involvement and interaction with various environments (see section 6.1). Within that body of knowledge are embedded the principles and prescriptions for the stewardship of the environment (Langton, 1998). This relationship within the fields of ecology, environmental science and NRM has been labeled Traditional Ecological Knowledge (TEK), with a specific focus on the physical applications of Indigenous knowledge to management (Berkes & Folke, 1998; Berkes et al., 2000; Pierotti & Wildcat, 2000; Butler, 2004). Although there is no universally accepted definition of TEK in the literature, the term describes a cumulative body of knowledge, practices and beliefs, evolving by adaptive processes that have been culturally transmitted through generations, concerning the relationship of all animate and inanimate beings with one another (Berkes & Folke, 1998; Berkes et al., 2000).

Analysis of the transcripts showed that investment of existing meanings and the creation of new ones, has lead to the evolution of stewardship practices of ‘care’ to include practices of ‘protection’. The participants have primarily used fire, manual cleaning and clearing of obstructions and debris to ensure the productivity of the springs is promoted and preserved. Rose (1996) describes these methods of ‘care’ as ‘rituals of well-being’, indicating that these rituals are not aimed at promoting promiscuity but life. Another aspect of ‘care’ that became evident was monitoring, participant comments indicated that they have observed daily and yearly negative changes in the health of the springs according to decreased water flow and water quality. These findings support evidence presented in the literature that monitoring

the condition of a resource is a practice that is characteristic of many Indigenous peoples, furthermore the close proximity of Indigenous peoples to the resource allows for observations of changes to be reliable and valid (Berkes et al., 2000). During these periods of observed changes participants attributed the loss of water flow and desecration of springs sites to wider society outside of their immediate family. Those 'people' from the participants' perspective lack understanding and respect for Indigenous heritage, thus devaluing their culture and violating the sacredness of their identity. The lack of respect shown towards the springs has been perceived as a lack of respect for Indigenous people because their culture, identity, spirituality and heritage are so intimately intertwined with the springs that they are themselves threatened when the water is threatened. To this end, the participants have been forced to develop and adapt a stewardship practice that enables them to manage how people outside of their immediate family interact with the springs. This stewardship practice has been described by the participants as 'protection' and has involved restricting the transfer of knowledge concerning the location of the springs to only immediate family members. The aim of 'protection' is to restrict the volume of people who may come in contact with the springs, therefore significantly reducing the possibility of springs being desecrated. The adaptive component of TEK that has generally been described in the literature tends to focus on the ability of Indigenous peoples to adapt stewardship practices in relation to disturbances of flora, fauna and ecological systems (see Berkes, 1998; Niamir-Fuller, 1998; Berkes et al., 2000). The current literature lacked examples of Indigenous peoples implementing stewardship practices directly aimed at controlling 'other' peoples interactions with 'country'. This study makes a unique contribution in that regard.

6.1.4 Differences between TEK and NRM and options for the future

Analysis of the transcripts revealed distinct differences exists between TEK and NRM in relation to management of springs. ('Spring Management' section 5.2.5 and 'Differences between 'stewardship' and 'management' section 5.2.6). Participant comments support the notion that actively caring for the springs results in 'clean' and 'natural' country conversely springs lacking Indigenous 'care' were described as 'full of rubbish', 'damaged' and 'desecrated'. Participants' categorised the differences in terms of time spent on country, job versus cultural obligation, care versus development and level of ecosystem understanding. One participant clearly described

the fundamental difference between TEK and NRM is a intimate spiritual link to 'country' (Greg, L.232). An Indigenous person has a deeper spiritual connection therefore would spend more time at a spring because 'caring' for the spring is viewed as a cultural obligation. Whereas a non-Indigenous person lacks the spiritual connection and would complete the required task and move on without applying full care. This confirms what is known in the literature evidenced by Holst who concluded, that what distinguishes Indigenous from non-Indigenous engagement with 'country' is 'neither realism nor sentimentality but how this engagement was spiritualised' (1997, p. 147). A second fundamental difference is the prominent temporal disparity, where Indigenous people see the past and the present all around them interacting with them and their environment. Barker (2006) similarly proposed that Indigenous peoples notion of time is intertwined with both the past and present, existing mutually and never in opposition. This contradicts with NRM, as the past is considered to be an objective recording of what happened in the past, distinctly separate from the present and revolving around a linear and progressive timeline (Barker, 2006).

Participants acknowledged that complete autonomous ownership and stewardship over the springs and the surrounding area will not eventuate any time soon, namely due to the lack of Native Title determination and the limited ability they have to exercise their traditional authority. In recognising the realities of their situation, participants have also adapted their stewardship framework to include the possibility of joint management with government and other formal agencies. Analysis of the transcripts suggest that participants rationally perceived joint management to be a way of ensuring their traditional responsibilities and obligations to 'country' as well as the continuity of culture, identity and connection to 'country' is maintained in modern society. Holst (1997) similarly concluded that it is realities that encourage Indigenous peoples to encourage joint management initiative rather than competition as a method of engaging with 'country'. Participants also recognised that joint management of 'country' will enable traditional owners and formal agencies the opportunity to work and learn together, utilising both forms of knowledge in order to better 'care for country'. These finding support those of Langton (1998) who posited that joint management projects are not simply the outcome of a merger of Indigenous and

Scientific knowledge, rather each source provides crucial knowledge towards developing understandings about 'country' and management practices.

6.6 Relevance to Natural Resource Management

Natural resource management has been described to exist within a paradigm that reduces people's interaction and relationship with the environment to the production and consumption of resources (Lang & Heasman, 2004). Society's effort to control nature has caused a slow and continuous reduction in the diversity and resilience of ecosystems, resulting in environments that are more sensitive to both natural and man-made disturbances (Berkes, 1998; Holling & Meffe, 1996). Given that NRM has not been all that successful in managing these environments sustainably because it is embedded in the productivist paradigm, focus has shifted to the intricate and detailed knowledge Indigenous peoples hold concerning the environments in which they live (Berkes & Folke, 1998; Carter, 2010). In recognition that such knowledge has enabled Indigenous peoples to live in a mutually beneficial and sustainable relationship with the environment, the question of 'if' and 'how' this knowledge can substantially contribute and/or influence management in today's modern society has been a hot topic in both literature, research and on-ground management.

Traditional Ecological Knowledge as it has been labeled by Western science, entails the complex and dynamic relationship Indigenous peoples have with 'country', that arises from their culture and is full of responsibilities and obligations (Berkes & Folke, 1998). The meanings that Indigenous peoples instill in 'country' develop and evolve from their interactions with their social, political and economic environments, they are culturally transmitted over generations and are integrated into the identity of individuals and groups (Proshansky et al., 1983). The results of this study highlighted that meanings instilled in the springs are not static, rather it is an ongoing process of development and redevelopment. Indigenous peoples develop and adapt stewardship practices according to the meanings instilled in 'country', therefore meaning is not only an on-going process but so are stewardship practices.

The process of engaging with Indigenous peoples in resource management and development initiatives is commonly viewed as a time-bound obligation to be completed in line with government protocols (Carter, 2010). If meanings and stewardship practices are on-going processes, then engagement processes should be as

well (Carter, 2010). If NRM intends on successfully incorporating and using Indigenous peoples' ecological knowledge then natural resource managers must refrain from distinguishing 'ecological' from 'cultural', 'social', 'economical' or 'political' in conceptualising Indigenous peoples understandings and relationship with 'country' and to ensure that the key characteristics of Indigenous knowledge is not transformed or lost (Langton, 1998; Butler, 2004). Carter (2010) argues that by implementing and utilising standardised engagement policies and processes managers run the risk of adversely affecting the potential contributions to be made. Rather engagement processes should be tailored to each group taking into account local contexts and ongoing processes of meaning making and adaptive practices.

The findings of this study demonstrate that there exists a complex relationship between Indigenous peoples and water. NRM should not be apprehensive or intimidated by that complexity or utilize it as a method of excluding Indigenous people. Rather NRM should acknowledge that there are complex relations between Indigenous peoples and sites such as the springs, and because these relationships exist should afford Indigenous peoples the right to actively partake in management. I hope that this study also debunks the myth that working with Indigenous people is complex or that it is too complex to understand the site relationship issues and thus put the idea of engaging and working with Indigenous people in the 'too hard basket'. The cultural complexity is in attachments to water and is between Indigenous people and the springs, not between Indigenous people and NRM. The people-people relationships can be made quite simple and the idea that it is too hard and complex to work together should be abandoned, as many of the participants well expressed.

6.2 Conclusion

This study investigated the meanings for freshwater springs held by Indigenous peoples and if those meanings change and/or evolve, and whether or not it influences their stewardship practices for those springs. Two key findings emerged from the study: firstly, squatting has become an alternative to Native Title in order to seek legal ownership of land, and Indigenous peoples land and water practices now involve a component of 'people' management. The plurality of meanings invested in the springs denotes the interconnected and interdependence of all things, and were indicative of the participants' relationship with 'country'. The relationship described by participants was complex and dynamic and supports the proposition that meanings invested in 'place' are context bound and developed through a person's interaction with their social, economical, political and cultural environments, constantly being 'developed' and 'redeveloped' (Gustafson, 2001). As Berkes (1993) similarly found management of natural resources are based on the meanings people attribute to place. Therefore, as meanings change and/or evolve so do stewardship practices. These findings have importance implications for NRM. Understanding the factors that influence changes in meanings and stewardship practices is an imperative if natural resource managers are to work with Indigenous peoples towards the conservation and preservation of the environment.

6.3 Reflections: Limitations and further research

The epistemology and theoretical perspective adopted for this study, recognises an individual construction and interpretation of the data (Willig, 2001). Therefore it is possible that the same data can be interpreted in entirely different ways, giving rise to alternative ways of perceiving and understanding it (Willig, 2001; Crotty, 2003). The study was within the methodological boundaries of case study research and the social constructionism episteme on which this study was based, acknowledges that realities and meanings are context-bound (Engler, 2004). Therefore, transferability focuses on conclusions under similar social, political, economical and environmental conditions (Padgett, 2008).

Further analysis of the data via discourse analysis may provide additional depth to and understanding of the study about 'how' decisions to alter meanings and practices are

made (Liamputtong, 2009). Liamputtong suggests that the objective of discourse analysis is to expose “the means by which social realities are produced” (2009, p. 288). Given the time constraints of a one year Honours project, I was restricted in the number of participants and the ability to carry out multiple interviews with participants. Further interviews may have revealed a more extensive list of themes regarding meaning and stewardship practices.

The inclusion of more than one researcher throughout the research process may also have brought to attention any influence and/or biases I may have had that could possibly have affected the reliability of the study findings. A major limitation of the study was the limited amount of training, experience, and skill that I as the researcher have in carrying out qualitative research, therefore the experience and skill required to successfully carry out qualitative research was developed over the course of the study.

Results of the analysis and review of current literature highlighted three areas for consideration of future research. Political action taken by Indigenous peoples to gain access to ‘country’ and involvement in the management of land and water outside the realm of Native Title, tends to focus on the formations of Indigenous organisations by traditional owners. The findings of this study suggest that Indigenous peoples may carry out political actions in a variety of ways, such as squatting. Secondly, the adaptive component of TEK has focused on the ability of Indigenous peoples to adapt practices according to disturbances in flora, fauna and ecological systems. Relatively little research has been conducted on the ability of Indigenous peoples to adapt stewardship practices to directly incorporate the management of people and how they interact with ‘country’. Finally, it became evident throughout the research that further research must be conducted on ‘how’ and ‘why’ meanings invested in specific sites changes and/or evolves as a result of Indigenous peoples interaction with their social, political, economical and cultural environments, and ‘why’ and ‘how’ these changes impact on stewardship practices. Further case study research with Indigenous peoples must be undertaken in order to enable their full involvement in NRM initiatives.

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APPENDIX

Appendix 1: Participant Invitation letter, Information package and Statement of Disclosure and Consent Form

Invitation Letter to Participants

Dear,

My name is Tamara Murdock. I would like to take this opportunity to introduce myself and provide a brief summary of my background. I am the daughter of Donna Murdock (nee Shiozaki) who is employed by Yamatji Marlpa Aboriginal Corporation Geraldton office. I was born and raised in Geraldton and am currently a student of Edith Cowan University completing my honours in Environmental Science in the Faculty of Computer, Health and Science (School of Natural Sciences).

As a requirement of honours I am undertaking an in-depth research project. In this regard I want to explore the relationship between cultural meanings and water practices through Indigenous stories of fresh water springs located on the banks of the Murchison River in Kalbarri, Western Australia.

You are a valuable source of information about your local environment. You are the cultural expert who I wish to learn and gain knowledge from. I would like to listen to your stories as an Indigenous person who has interacted with fresh water to develop an understanding of the relationship between nature, culture and humans, Thereby educating the wider community about how your culture enables you to care for country.

In order to capture your stories I wish to conduct one to two conversations approximately one hour in length per session. Although I will ask you questions during the interview, I will guide rather than direct the interview. It is important that you feel free in how you answer the questions and to offer information that you feel is valuable.

There is no obligation to participate if you do not wish to but I am very pleased to extend an invitation to you to become a participant in my project. Please find enclosed an Information package detailing the project and your role. If you wish to become a participant, please sign the enclosed consent form and return in the stamped addressed envelope.

If you have any queries please contact me on [REDACTED]
(university) If you leave your name and contact number I will be happy to get back to you.

My supervisors will also be happy to speak with you. Their names are Pierre Horwitz, (08) 6304 5558 and Andrew Guilfoyle, (08) 6304 5192.

I sincerely appreciate any contribution you are willing to make to my project and hope that you accept this invitation to participate.

Kind regards,

Tamara Murdock

Information Package for Participants

Research Project: *Exploration of relationships between cultural meanings and water practices. A case study analysis of Indigenous stories of fresh water springs in Kalbarri, Western Australia.*

Research Project Description

In Western societies prevails a worldview of increasing profit and efficiencies of labour and capital for an expanding population. Therefore people's interaction and relationship with land and water is reduced to the production and use of resources. This is mirrored by the basic principles of control, intensification, increased productivity and human-centered approaches characteristic of Natural Resource Management (NRM). This strategy has been successful in the short term but consequently encourages 'a decline in the health of the environment and people.

One alternative to this strategy is to look at what knowledge already exists within land and water. Indigenous knowledge is one such source. Indigenous societies have maintained a mutually beneficial relationship with land and water for many centuries. Born out of their cultural beliefs they emphasize that humans and nature are linked. Many academics now believe that humans, culture and nature are inseparable and that Indigenous knowledge has evolved and changed over generations in response to changing local environmental conditions.

Indigenous knowledge is grounded in the premise that the physical, biological, and cultural environments are part of our lives and that knowledge and experience is gained through this interaction. Therefore, Western society should seek to build partnerships with Indigenous people in order to utilise their knowledge in an effort to address current and future environmental issues.

Whilst there is acknowledgement of Indigenous practices changing and evolving and the importance of Indigenous knowledge in caring for country. What has been neglected is whether cultural meaning towards a specific place changes over time and how this may affect chosen land and water management practices.

Project Aims

Aim 1: Conduct a literature review in order to identify and derive appropriate methods for determining the nature of cultural meaning for water in located places.

Aim 2: Identify places of fresh water (in this case fresh water springs located in Kalbarri) and the stories associated with them, through interviewing local indigenous people.

Aim 3: Establish a mechanism by which the cultural appropriateness of the research (Aims 1 and 2 above) can be assessed.

By achieving these three aims above, a combination of information will enable the question '*do cultural meanings change and/or evolve and does this effect interactions with land and water practices*' to be answered.

Research Procedures

Sample size and Participant Inclusion/Exclusion criteria

Approximately 5-6 participants will be selected (non-gender specific) in order to sample for meaning rather than frequency. This will allow for rich accounts of your stories to be provided, as I do not require making a generalization of the findings.

You have been invited to participate because of the valuable information that you can provide and because you are of indigenous descent and over 60 years (to ensure stories collected date to the period before Kalbarri was officially established). You were also suggested by local people to have interacted with the fresh water springs in Kalbarri.

Once one to two participants have been selected, you may be asked whether you know of others who might be suitable for the project.

Interview Procedure

You will be interviewed (tape-recorded) once or twice, each approximately one-hour in length at a location that is mutually agreed. If you are not comfortable for the interview to be conducted in your home and travelling to the agreed location is problematic, I am willing to pick you up and drop you off.

Although I will ask you questions during the interview, it is important that you feel free in how you answer the questions and to offer information that you feel is valuable. I will encourage you to share your stories associated with fresh water springs as well as talk about aspects of your life that you feel I should know. Most importantly I acknowledge that you are the cultural expert and whilst I will ask questions most of the time I will just listen to what you have to say.

A copy of the transcript of your interview will be returned to you as soon as possible for you to review and correct.

Story and Information Interpretation

I will aim to preserve the context, structure and detail of your interview(s). I will use your interview(s) to construct an understanding of the meanings that you attribute to fresh water springs. Participants may be asked to check information throughout the course of the project to ensure the accuracy of information collected.

Distribution of Findings

Findings will be in the form of a thesis and distributed before the end of 2010. A copy of the thesis will be given to each participant and will be available upon request. It may be appropriate to give a copy to the local visitors centre and government departments.

Potential Risks and Inconveniences to Participant

The only potential risk to you, as a participant is anxiety induced by the interview process. This will be prevented by the researcher informing you at the beginning of every interview that at anytime you can stop the interview and that you do not have to discuss or answer questions that you feel are sensitive and/or private. At the beginning of the interview you will also be asked if there are any culturally sensitive topics that you do not wish to discuss.

The only inconveniences you will be subjected to are filling in forms and giving up your time to participate.

Potential Benefits to Participants and the Community

The potential benefits you may gain from participating in my project include a deeper understanding and realisation of the importance your knowledge has for current and future management of natural resources. By taking part it may encourage you as well as future Indigenous generations to become involved in other projects.

This research may encourage the development of resources for Indigenous research generally, supporting community consultation and developing research priorities by Indigenous people.

I hope this project will encourage the Indigenous community to participate directly in research using the significant amount of vital information you already hold. Your stories and information have the potential to change how country is currently cared for and will enable a better understanding of your role in caring for country.

Locally my project will contribute collective knowledge about the fresh water springs in Kalbarri by you. Your knowledge may make the wider community aware of your cultural history and encourage people to care for and respect the fresh water springs from your perspective.

Confidentiality of Information

The information provided by you will only be used in regards to my project. Apart from me, only two to three of my colleagues may have access to sections of transcripts to evaluate how I constructed understandings of meanings attributed to the fresh water springs. Confidentiality will be maintained during this process by removing all information that directly identifies you (i.e. your name or names of family members).

All information I collect from you will be securely stored at Edith Cowan University in a lockable cabinet or a password protected computer file.

Storage of data after the Project has been completed

If your information has community or heritage value I will keep it permanently at this stage, at Edith Cowan University in a lockable cabinet or password protected computer file. Your stories may be archived for future reference as part of a collection

of Indigenous history and knowledge and may be stored at the State Library of Western Australia Battye Library Oral History Unit. It is possible that access to your stories will only be granted once permission is given by you or members of your family. You are welcome to suggest storage locations and recommendations concerning the access of information.

Statement of Disclosure and informed Consent

(To be read and signed by Participants)

Project Title

Exploration of relationship between cultural meanings and water practices. A case study analysis of Indigenous stories of fresh water springs in Kalbarri, Western Australia.

Possible concerns of participants

1. Subject to your consent, your name will be published in the thesis in association with your Interview(s).
2. There are no expectations of Participants to take part in environmental management activities as a result of participating in this project.

Giving your consent

I _____ have read the above information and:

I have been provided with an Information package and I understand the information provided.

I have been given the opportunity to ask questions and I am aware I can contact the researcher with any additional questions.

I understand that participating in this project will involve being interviewed and the information I provide will only be used for this project.

I freely agree to participate in the project and understand that I am free to withdraw from further participation at anytime, without explanation or penalty.

(Please circle **YES** or **NO**)

I give permission for my name to be published in the thesis in association with my interview(s)

YES

NO

Participant _____

Date _____

Research Student _____

Date _____

Further Questions

Any questions you have concerning this project can be directed to Tamara Murdock (research student) at Edith Cowan University, Faculty of Computer, Health and Sciences (School of Natural Sciences), on [REDACTED] or (08) 6304 5772 (university). Questions may also be directed to my supervisors, Pierre Horwitz on (08) 6304 5558 or Andrew Guilfoyle on (08) 6304 5192

Appendix 2: Interview Guide

Interview themes

History

Meaning – Cultural – Spring sites

Relationships

Pre and Post colonisation of Kalbarri

Care vs. management

Water management – History, Issues, What management programs have been implemented?

Change over time

Interview procedure

Step 1: Opening question – Can you tell me stories about the springs or may be about the area where the springs are located?

OR

Can you tell me about the springs?

OR

Can you tell me your earliest recollection of the springs?

Step 2: Track themes throughout stories. If themes are not dealt with in detail, take note and ask questions at the end of the interview.

Step 3: Ask questions at the end of the interview if themes have not been covered.
End with a closing question – What is going to make the next generation want to go and look after the springs?

OR

What would you like to see done about the springs?

Appendix 3: Interview Questions

Interview Questions
Willow
What's the story about how you came to be here (in Kalbarri)?
So water seems like it's an important thing? (In response to earlier comments)
Have they (springs) changed with Kalbarri only being their fifty years?
The water is important and the river system how was it all protected?
So those spring sites how are they physically looked after?
Those on the Foreshore reserve...how's the management of them?
How does that...does that affect culture? (In response to springs desecrations)
I mean so what would you like to see done about the springs sites people do know about?
So that joint management, would you see, would you like to see that extend to those, those spring sites, those ones?
Mr. Mallard
So we'll start off with, if you want to start off with your history and about you and we can go from there.
So what's the stories for this area then?
So when was the first time, if you can remember was the first time that you, visited those springs?
So you were saying along the river there were only certain places that you were allowed to camp, like you had your camp. How did you decide where you were going to camp?
So those springs sites there pretty important to you traditionally? (In response to previous comments)
So how does your...being Nanda person what's the relationship you have with the land, with the springs?
So with you culture, the meaning of those springs, its life its the giver of life, has that changed over the years, from when you were a kid?
How does that effect your connection to those places when you can't, can't get into them?
And what would you like to see done? For the future?
Greg
So what's your history?
What are the stories of this area?
So those spring sites...what do they mean to you?
Have you noticed if the springs have been affected? (In response to earlier comments)
So the ones closer to town compared to the ones further away that people don't know about is there a big difference between the...

do you think it differs between how traditional people look after an area and then someone who from management comes in?
What do you think needs to be done then?
Do you think that's what the mentality of this area is of Kalbarri?(In response to earlier comment)
So what do you see for the future, for your son, for his children, what do you hope for them?
Nanna Iris, Helen and Brodeine
So we'll start from the beginning if you want to start from about you, and about your history, where you grew up and what you did and all that sort of stuff.
So where'd you learn that from, where'd you learn all your? (In relation to earlier comment about bush tucker)
Why is that important to you is that important to you to show?
Did you go into Kalbarri when you were a kid?
What was Kalbarri like, can you remember what it was like then, compared to now?
Why is it important to continue to do those things?
Yeah. So you rode along the river bank when you use to go along?
Does that same concept of Government, coming up against Government, would you say that goes into the same thing for like land, looking after land?
Yeah, I mean so do you see how you look after or care for land different to how non-Aboriginal people or Government agencies all that manage land. Is there, do you see a difference?
Mr. Mallard, Mrs. Mallard. Nanna Iris and Willow
So is there anything that, you remember from, from when we last talked that you want to add?
So can you tell me a bit about the history of the management in that area, in Kalbarri? How does that translate into say, the management, because you're saying like, you've got this Aboriginal law and then you've got this white law to deal with and you've got to balance them, so how does that, does that effect like the springs with the management of the springs?
So all those springs do they all have the same meaning for you, do they all mean the same thing?
So do feel like you have an obligation to look after?
So that process of cleaning out the spring has that been the same process that you've know for, since you were a kid?
So there are some of those springs that are closer to town and I know we talked about them before, and you saying there are a lot of springs that just run all along, so are there any issues that affect the health of the springs?
So you said like you noticed that the changes that were occurring at the springs, so of started when Kalbarri started to get developed.
You said one of the things that like that the protection for the springs is, is that now that you keep it, you keep it a secret. So why did that happen. Has it always been like that?
Do you think there is a difference between how you and your family and your people look after the springs compared to how other agencies or organisations might do the job?
How would you like to see it done, if you want to protect them?